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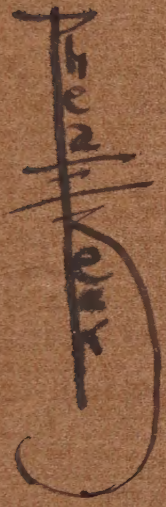


Rhea E. Beck.
Pittsburgh, Pa.
U.S.A.

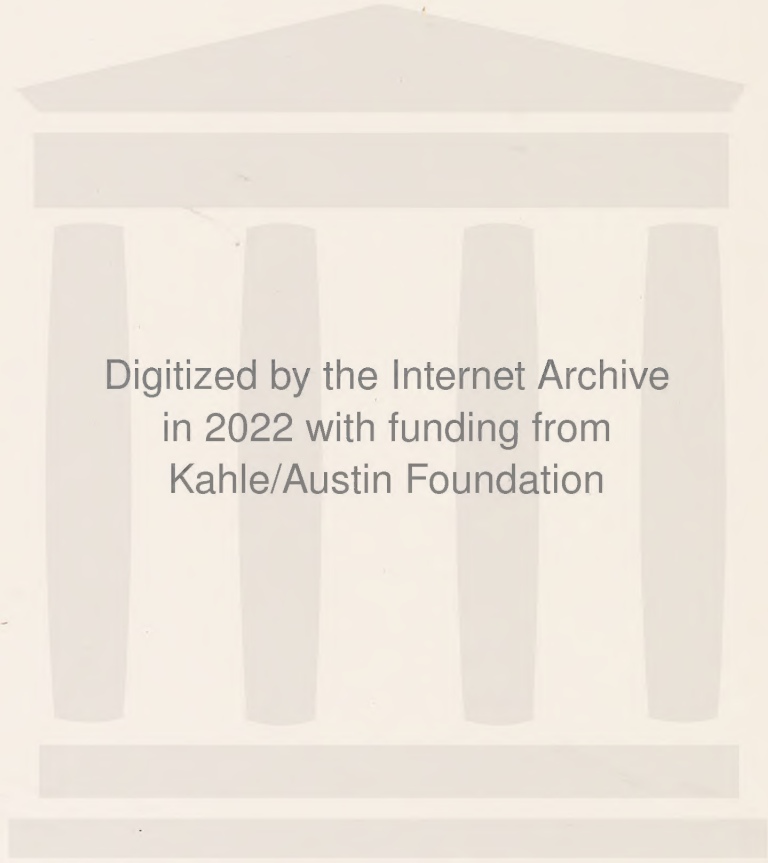
CARPENTER'S WORLD TRAVELS

—

Familiar Talks About Countries and Peoples

WITH THE AUTHOR ON THE SPOT AND THE READER IN HIS HOME, BASED ON A HALF MILLION MILES OF TRAVEL OVER THE GLOBE

"READING CARPENTER IS SEEING THE WORLD"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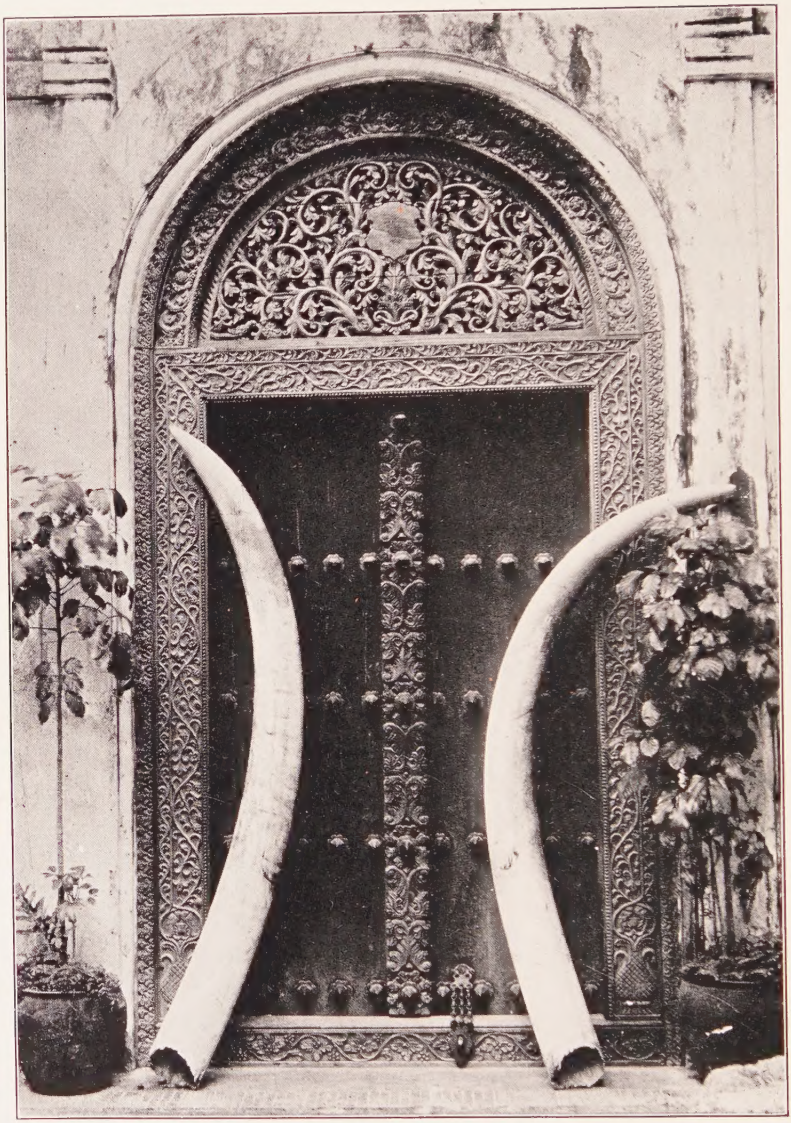
UGANDA TO THE CAPE



A DOORWAY IN ZANZIBAR

The "City of Cloves" is one of the portals of the Dark Continent through which the white man's goods pass in exchange for ivory and other products of the lands beyond.

CARPENTER'S WORLD TRAVELS

UGANDA TO THE CAPE

Uganda, Zanzibar, Tanganyika Territory, Mozambique, Rhodesia, Union of South Africa

BY

FRANK G. CARPENTER
LITT.D., F.R.G.S.

WITH 111 ILLUSTRATIONS
FROM ORIGINAL PHOTOGRAPHS
AND ONE MAP IN COLOUR

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1925

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While most of the illustrations in CARPENTER'S WORLD TRAVELS are from my own negatives, those in this volume have been supplemented by photographs from the Publishers' Photo Service, the Keystone View Company, Dr. H. L. Shantz of the U. S. Department of Agriculture, the U. S. Navy Recruiting Bureau, the National City Bank, Ewing Galloway, and B. M. Powell.

F. G. C.

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UGANDA TO THE CAPE

UGANDA TO THE CAPE

CHAPTER I

WHERE WE ARE GOING

FROM Lake Victoria to the Cape of Good Hope! From that great body of fresh water in Central Africa explored by Stanley only a half century ago to the salt southern seas where the Atlantic and the Indian oceans meet! Between them lies half a continent, containing every phase of man and Nature, from the jungle with its savage tribes, its lions, elephants, and other big game, to the white man's Africa of farms and mines, railways and automobiles, newspapers and schools.

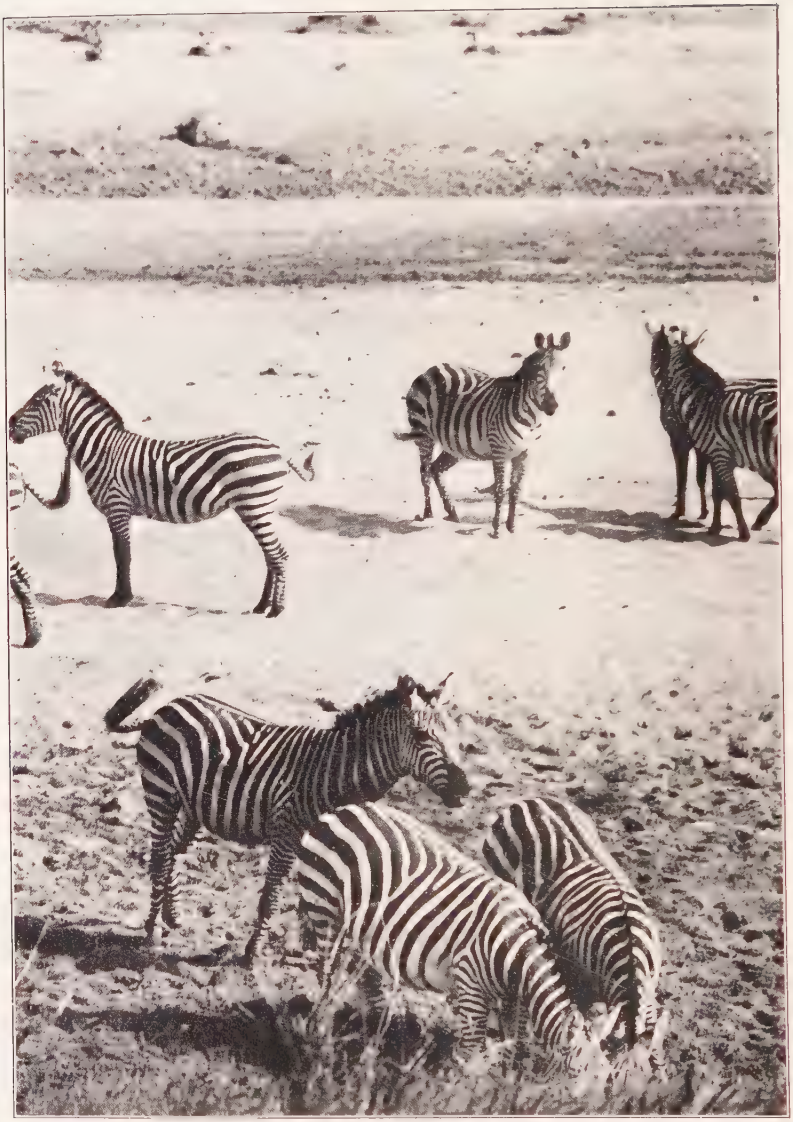
As we proceed I shall ask you to let me paint the peoples and the countries as they pass before us. From the deck of our steamer I shall describe Lake Victoria as we go around it, visiting the islands and stopping at the source of the Nile, which, as an outlet of the lake, here begins its journey to the sea. Not far from Victoria our views of Tanganyika Territory will begin, and they will continue all the way to Dar-es-Salaam, the former German capital, now held by the British. We shall explore the semi-civilized land Uganda and see the snow on lofty Mount Elgon and Mount Kilimanjaro. Standing on Livingstone Island in the midst of the Zambesi, we shall be held spellbound by its mighty falls, higher than Niagara,

pouring down into a cauldron four hundred feet deep. To see the gold of the Rand and the diamonds of Kimberley, we shall go down into those caves of Aladdin far under the earth, while above ground we shall tramp through the kraals of the Kaffirs and ride about the modern cities built by the men who are making South Africa a white man's land.

We shall start in the heart of the tropical countries of the Equator with their dense population of blacks, and end our travels in the temperate zone amid people of the same race and tongue as our own. Uganda, Tanganyika Territory, Zanzibar, and Mozambique, or Portuguese East Africa, are followed by such countries as Northern and Southern Rhodesia, where we shall walk in the footsteps of Cecil Rhodes. From there we shall go southward into the Union of South Africa with its many provinces, traversing the Transvaal, the Orange Free State, and ending our journey in Cape Colony, where, at Cape Town, under the shadow of Table Mountain, we shall take a great ocean steamer for England and home.

This book is the third and last volume of my African travels. The first, "From Tangier to Tripoli," described the mighty Sahara and the countries that border the Mediterranean from Gibraltar to Egypt. The second, "Cairo to Kisumu," embraced Egypt and the British Sudan, the lands along the Red Sea, and Kenya Colony, ending with the naked Kavirondo at Kisumu on Lake Victoria, and it is there that this story begins.

All the way from "Uganda to the Cape" we shall meet many strange people, some, like this young mother, dressed in a robe made of bark, and others who are yet to discover any use for clothes.



Besides furnishing sport for big game hunters, the zebras about Lake Victoria are killed by the natives for their flesh, which is said to make excellent meat, and for their hides, which are made into leather and rugs.

CHAPTER II

ON LAKE VICTORIA

GET out your straw hats and pith helmets, pack up your white clothing and thin underwear, and join me in the heart of the Black Continent for a trip over what, next to Superior, is the biggest fresh-water lake in the world. We are on a little steamship far out in Lake Victoria, with the mainland nowhere in sight. On all sides of us, as far as our eyes can see, are blue waters dotted now and then by islands. Some are high and rocky; others are bordered with swamps and beds of papyrus. Parts of the lake make me think of the Thousand Islands of the St. Lawrence, and many of the islets would not be out of place if they were off the shores of Ireland or in the English Channel, except that there are no settlements on them. Along the shores of some are strange birds and huge black hippopotami, their bobbing heads occasionally seen as they swim about.

How delightful it is! We are almost on the Equator, but the air is as cool as on our Great Lakes in midsummer, though the invigorating ozone of those regions is absent. At Kisumu, where we took ship, it was much warmer. The porters who carried our luggage from the Uganda Railway to the boat were stark naked, and the steamer was loaded by a gang of blacks who wore breechcloths only out of respect to the passengers. We remember how

they sang as they worked, and how clearly we could see the beautiful play of their muscles as they carried the freight to the ship.

We were all afternoon coasting the Gulf of Kavirondo, a great inlet more than forty miles long and fourteen miles wide. It is bordered by volcanic mountains, some rounded, some cone-shaped, and some seeming to touch the sky. The gulf is narrow where it joins the rest of the lake, which seems to be cut off by a great chain of islands of curious shapes. Our first night was spent alongside Lotui Island, about six hours from Kisumu. It was hot close to the shore, and we were pestered by the swarms of gnats and moths attracted by the lights of the ship.

Sitting at home in far-off America, amid all the surroundings of modern civilization, doubtless it is hard for you to appreciate the size of Lake Victoria and to realize just where it is. It lies upon the Equator in the heart of east central Africa. It is as far west of the Indian Ocean as Detroit is from New York, and as far east of the Atlantic as the distance from the Mississippi to the mouth of the Hudson. Only a few miles north of where I am writing the Nile starts on its winding course of almost four thousand miles to the Mediterranean Sea, and twenty-five hundred miles in a straight line to the southwest is the Cape of Good Hope. By a march of less than two hundred miles from the southern shores of Victoria I could reach Lake Tanganyika, the western shore of which is only a short distance from a branch of the Congo, down which I could float to the Atlantic.

As I have said, except for Lake Superior, Victoria is the largest body of fresh water on earth. It outranks Lake Huron by about four thousand square miles; in fact, it is

nearly one third as large as all our Great Lakes combined. It is more than half the size of either Kentucky, Virginia, or Ohio, and if you could pick it up and drop it down upon New England, it would drown the whole of Massachusetts, New Hampshire, and Vermont. Its maximum length from north to south is about two hundred and seventy miles; its maximum width from east to west is about two hundred and twenty-five miles. There are places where one can travel over it for a hundred miles and not see land. Although only about half as long, it covers more than twice the area of Lake Tanganyika. It is almost quadrilateral in shape, while Tanganyika is a long, deep, narrow trough between high hills. Lake Nyasa also is long and narrow, and so are Lakes Rudolf and Albert.

Lake Victoria is more like our own Lake Superior than it is like any of the other great bodies of fresh water. It lies on the roof of the African continent as Superior lies on the height of land of the North American continent. It is, however, more than six times as high up in the air as Lake Superior, and more than seven times as high as either Huron or Michigan. Its altitude is about four thousand feet above the sea, or within five hundred feet of that of Great Salt Lake.

There are places in Victoria where the water measures more than six hundred feet deep. This is about three times the depth of Lake Erie, but not nearly so deep as Lakes Superior, Huron, and Michigan. Its surface rises forty or fifty inches during some years, being highest in July and lowest in November.

Until recent years, this region was one of the blackest parts of the African continent. Slavery was common and cannibalism rife. Even now, about the only inhabitants

of the surrounding country are tribes of African natives, who in some regions are still warring with one another. In the volume "Cairo to Kisumu" I have described the naked Kavirondo, who live east of Victoria. North of the lake are natives as different as we Americans are different from the Japanese or Chinese, and at the south are still other tribes with other customs and costumes. The whole lake is surrounded by a dozen or more peoples, each distinct from the rest in appearance and in its degree of civilization. No one knew that Lake Victoria existed until Speke discovered the southern shores in 1858; and we had no idea of its extent until Henry M. Stanley explored it in 1875. Stanley was told that the lake was so large that it would take several years to go around it. He built the *Lady Alice,* a big rowboat with a sail, and starting at Speke Gulf gradually made his way around the shores, covering many of the points at which we shall call farther on.

Until Stanley came, the only boats on these waters were like those we now see used by the natives at Kisumu and elsewhere on the lake. Some are merely dugouts, and others are of boards held together with the fibre of the raffia palm. They are seldom fitted with sails, and can be kept from sinking only by industrious bailing. When one of them capsizes in a storm, the boatman often jumps overboard and holds on to the edge to keep it afloat. The average boat of this type is twenty-five feet or more long, three feet wide, and two feet deep.

To-day the lake is navigated by several steamers belonging to the British, one being the *Sir William McKinnon,* which was brought up from the ocean in pieces before the Uganda Railway was built. The steamers make regular

Tribes that are almost next-door neighbours often have opposing views about modesty, some considering a woman wearing little more than a girdle properly dressed, while others require her to be fully clothed.

Some of the tribes living on the shores of Lake Victoria are famous for the walls, mats, and fences they weave of the reeds that in this region grow to a height nearly twice that of Mr. Carpenter.

trips connecting with the trains of that railroad, the voyage around the lake from port to port requiring ten days.

I wish I could show you this little Uganda mail boat on which I am travelling. It is a twin-screw, wood-burning vessel, much like some of the smallest steamers on our Great Lakes. It has about a dozen cabins amidships, each equipped with electric lights and fans. Near the stern is a dark little dining saloon, back of which is a ledge up under the port-holes where the second-class passengers sleep. On the top deck a double awning of canvas protects us from the tropical sun, and at midday some of the passengers keep their hats on also. The sun's rays are so strong in this latitude that one must be careful not to go bareheaded unless in the shade.

The only Europeans on board are the half-dozen first-class passengers and the English officers of the ship. Among them there are two British officials on their way to their posts in interior Uganda, a surgeon bound for Mwanza in Tanganyika Territory, a Congo trader who has about a cart-load of beads and brass wire to trade for ivory and rubber, and a missionary going to Kampala. The sailors are half-naked natives who are paid about ten cents a day. The stewards and the cooks are Hindus, and their wages are higher than those of the blacks. We have also on board a half-dozen native soldiers, who look after the mail. The bags of letters were carried on board at Kisumu under guard, and a soldier with a gun in his hand watches over them day and night throughout the voyage.

The accommodations on the boats are fairly comfortable. The Hindu cooks are good, and we have four or five meals a day. This morning, for instance, I was awakened at seven by my black boy, who brought me a

cup of tea and a cracker. At half-past eight the breakfast bell rang, and we went into the saloon for a substantial meal of oranges, fried herring, bacon and eggs, and marmalade and toast. The coffee served was grown about the lake. It was poorly made, but the tea, which I next ordered, was good. At one o'clock we had a lunch of pea soup, boiled tongue, roast mutton, and chicken curry with rice, ending with a dessert of native fruits and canned California apricots. Our dinner at eight o'clock will be about the same as lunch, save that if we like we may wash it down with whisky and soda, wine, or beer.

The cost of the first-class meals is about two dollars a day, with extra charges for drinks. The word "peg," common also in India, is used on all bills of fare. It comes from the old saying that every drink of intoxicating liquor puts a peg in one's coffin. If you want a man to take a drink with you, you ask him to come and have a peg, and there are certain hours of the morning and the evening known as "peg times" or simply "pegs."

The ship leaves much to be desired as to freedom from rats, cockroaches, and other insects. I have never before seen roaches so numerous and so large, some of them being as big as mice. They run about the dining room, and in my cabin come out in the daytime and look at me while they sharpen their teeth in order to trouble me the better at night.

Another infernal insect is the jigger. I don't know whether I got mine on shore or on ship, but my native boy has just extracted the eggs of three of these pests from my feet. The jigger is a little insect that bores a hole in one's flesh, usually under the toe-nails. There it lays its eggs, which develop into a little sac about as big as a pearl

shirt stud. This sac must be cut out at once, or the eggs will hatch into worms that eat their way through the flesh, often causing the loss of the toe. The insect is supposed to have come originally from South America, but it has already conquered a great part of Africa. It is especially troublesome about Lake Victoria.

As to mosquitoes, we have none here on the lake and practically no flies except the common house fly. There are plenty of mosquitoes of all kinds on the land and swarms of midges in many parts of the lake. This morning I saw what looked like a waterspout rising from the surface of the lake, but the captain told me it was composed of myriads of these midges, which are born in the water and fly up at one time into the air. They sweep over the lake in great numbers, raining down upon the boats like so much black pepper. They come in such quantities that the men sweep them up with brooms and throw them overboard. They even get into the cabins and cover the dining tables, although the port-holes are covered with netting and every open space protected as far as possible. The midge lives its whole life in a single day and its bite is harmless.

This cannot be said of the tsetse fly, from which comes the sleeping sickness that at times has ravaged Uganda and killed hundreds of thousands of people in a few years. The natives here are more afraid of it than of smallpox. After the bite of the tsetse, the disease comes on slowly, and it may be several years before the victim falls into the long slumber from which he never wakes. At first the sleep is only occasional, but it increases until the patient sleeps all the time and finally dies. The disease seems to be one of the brain, and the doctors say that it is caused

largely by a little worm or bacillus that is injected into the blood by the tsetse fly. This bacillus multiplies rapidly and soon penetrates to every part of the system. When it reaches the brain the sleeping symptoms begin.

At first the sickness was confined to the valley of the Congo, but later it spread to the islands and coast of Lake Victoria, and it is found also in some parts of Kenya Colony. The disease is supposed to have been brought to Lake Victoria by the porters who carried ivory tusks and rubber on their heads from the Congo to Entebbe and other ports about the lake.

The tsetse looks somewhat like the bluebottle flies we have in America, being three times the size of our ordinary house fly. It has been known about Lake Victoria for ages, but it was not at all dangerous until natives infected with sleeping sickness came here and passed on the contagion to the flies. Once it has bitten a man who has sleeping sickness, it will carry the disease to every victim that it bites in the future.

Doctor Koch, the celebrated German diphtheria specialist, who had a large hospital with hundreds of patients here on the Sese Islands, at one time thought he had discovered a remedy. This was to fill the patient with arsenic, which counteracted the disease, but the trouble was that the arsenic usually killed the patient. Since then the German scientists have, they claim, discovered a never-failing cure for the disease, and at one time they regarded this as of such value that it was said they intended to give it to the world only in case the African colonies they lost during the World War were returned to them.

The tsetse fly is said to have infected also the hippo-

potami and crocodiles found about Lake Victoria. The flies introduce the microbes into the blood of the hippos by biting them under the lobe of the ear where the skin is thin, and every fly that thereafter feeds upon that hippo becomes inoculated. I understand that this source of infection is serious because the hippo has so many thin veins of blood running through its thick skin. As to the crocodiles, they are bitten under the neck or between the scales. However, these stories seem far fetched to me, and I do not vouch for them.

The tsetse fly never goes far from water. This fact has greatly facilitated preventive measures, and the removal of the native population from the banks and islands of the rivers and lakes was followed by the practical elimination of the disease. Furthermore, it has been discovered that the fly can be driven away from a district by cutting down the bushes and planting lemon grass, a measure that has been most successful. This has been done at Entebbe, where sleeping sickness now never occurs, although it was once very prevalent. The lemon grass is also useful in another way; it is distilled into an essence used largely in making extract of violets.

The sleeping sickness of Nyasaland and Rhodesia is believed to come from the bite of a different variety of tsetse fly, which is more widely distributed, less restricted in its movements, and much more difficult to deal with than the northern species. Although not so widespread as in Uganda, the sleeping sickness of the south is quicker in action, more deadly in results, and yields to no known remedy. In Nyasaland a species of dragon-fly has been observed to prey on the tsetse, a discovery which may have far-reaching results.

The British have established sleeping sickness hospitals at different places about the lake. When a village has an epidemic of the sickness those who have been bitten are segregated in fly-proof houses and the rest of the inhabitants put under quarantine until it is determined whether they have been infected or not. The worst epidemics occur close to the lake, where in some villages the people stubbornly have refused to move. They say that their fathers lived and died there and that they will do the same.

The Sese Islands, where Doctor Koch had his famous hospital, lie not far from Entebbe and are reached by canoes or other small boats. In the past they were a seat of paganism and the home of the famed goddess Mukasa, who ruled all Lake Victoria. This goddess has a temple on the island of Bubembe, to which the kings of Uganda formerly sent tributes. They gave flocks of sheep and goats in such numbers that when the royal sacrifices were made the blood ran in streams from the gates of the temple into the lake. Mutesa, the grandfather of the present king of Uganda, once offered up to this goddess one hundred men and one hundred women, besides one hundred cows and one hundred goats.

As I write we are nearing the shores of Uganda and coming in to Entebbe. The scenes from the ship are more like those of a civilized territory than the heart of the Black Continent. The landscape reminds me of that along our Great Lakes. Much of the ground is cleared but there are clumps of dark green woods here and there. In one place was what seemed to be a series of fields where the wheat or corn had just been harvested, the shocks dotting the country-side among the yellow stubble. As we passed I had a discussion with a fellow traveller as to

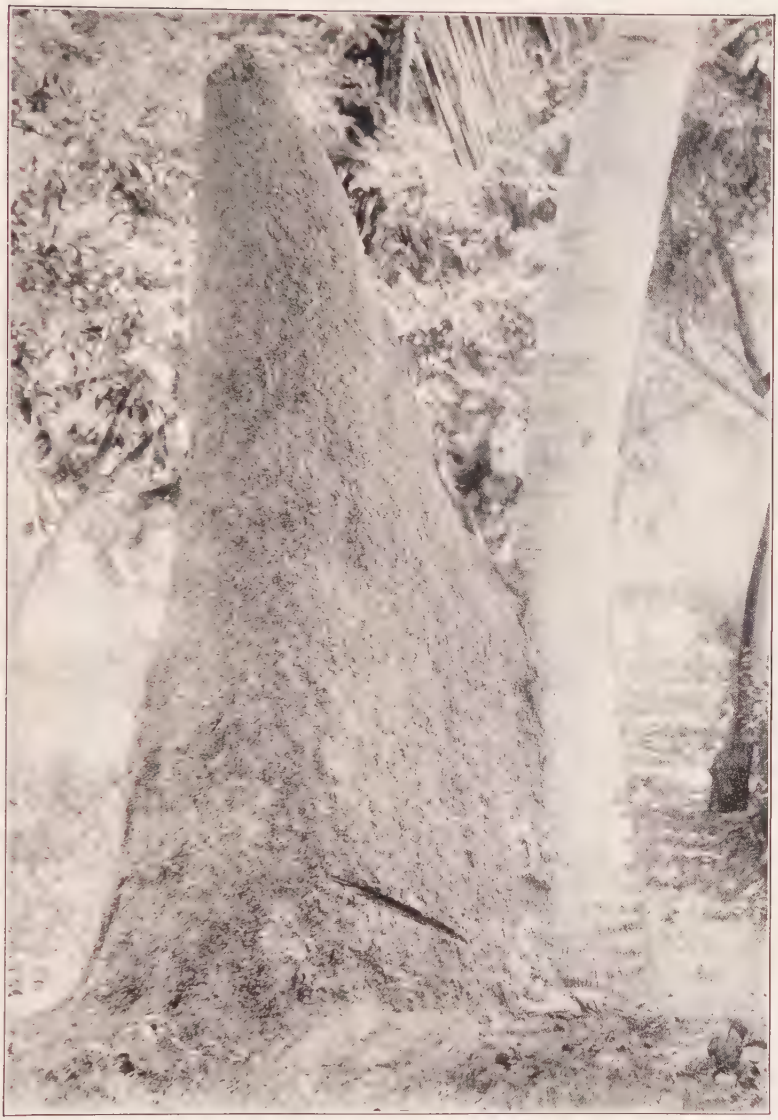
whether they were wheat or corn. I bet upon wheat and my companion bet upon corn. We left the question to the captain, who brought out his field-glass and showed us that what we thought were shocks of grain were really mounds of yellow clay, the homes of white ants.

CHAPTER III

IN UGANDA

TAKE a seat with me on the veranda of my hotel at Entebbe overlooking Lake Victoria, while I tell you something of the Uganda Protectorate, which the British in 1890 added to their share of the white man's burden. You had best keep your hat on, for there are lizards and scorpions in that thatched roof overhead and some might fall down upon us as we talk. I advise you also to lace your shoes tightly; since my own experience with African jiggers, Epifras, my native servant, goes over my toes every morning.

Do you see that black streak moving across the path down there in front? It is made up of the famous warrior ants, which will attack you if you go near them. Their bite feels like red-hot pincers, and they will permit their heads to be torn from their bodies without letting go. They are far more dangerous than yonder baby lion playing about the tree to which it is tied by the clothesline around its neck. It is only as big as a Scotch collie and not old enough to know its strength. A traveller from Lake Tanganyika brought it in last night, along with two gray parrots with red tails, which are now alternately whistling and scolding in the trees. Oranges and lemons are growing in the garden, great beds of feathery papyrus are waving to and fro on the shores, and everywhere we can see tall palms with their whispering leaves.



Central Africa swarms with ants of all colours, sizes, and degrees of ferocity. Some of them build clay houses twenty feet high that extend an equal distance below the ground.

White men in Uganda live in low houses of the bungalow type, built of plastered mud or native brick, and roofed with corrugated iron. Usually there are air spaces between walls and roof for better ventilation.

Entebbe, on the shores of Lake Victoria, is the administrative centre of Uganda Protectorate, and a fitting-out place for expeditions into the back country. It is a town of trees and beautiful flowers.

Before we begin our talk, let us look around and try to realize where we are. This hotel is right on the Equator. It is almost as high above sea level as the tops of the Alleghanies, and the cool breezes from Lake Victoria make the climate as delightful as that of Virginia in summer. Uganda lies on the very top of the African continent and in the midst of towering mountain peaks. The crater of Mount Elgon pierces the sky at an altitude just a bit higher than the tip of Pike's Peak. Away off to the east are Mounts Kilimanjaro and Kenya, while at the west are the mighty highlands of Ruwenzori, which compare in height with Kilimanjaro itself.

Most of Lake Victoria belongs to Great Britain, which owns all the territory west to the Belgian holdings, north to Egypt, south to Portuguese East Africa, and east to the Indian Ocean. Uganda, away down here at the Nile's source, is in some respects the richest colony of all John Bull's African territories. Indeed, the English officials tell me that it contains the cream of this continent. There are few other places where so many valuable crops can be grown. In some of the provinces the natives raise grain practically without cultivation; in others coffee grows wild, and everywhere are bananas, the staple food of the majority of the natives, and other tropical fruits. In another chapter I shall write of the possibilities of cotton growing in Uganda, and of the prospects for stock raising, which promise to make the country a meat basket for England.

The land is one of deep forests as well as of rich rolling plains covered with grass. There are many hills and hollows, with swamps in the valleys. The swamps are often spotted with woods, and one is never out of sight of the

papyrus, the tall, tassel-like grass from which the Egyptians make paper. Rubber can be grown here, and the country has vast resources in fibres that can be used for making rope and cloth. Raffia fibre is shipped from Entebbe to England, where it sells for as much as one hundred and fifty dollars a ton. Uganda can raise hemp as good as that produced in the Philippines, and China grass and sisal are said to thrive equally well.

The Protectorate is rich in minerals. Hematite ore is found almost everywhere, copper has been discovered in the central provinces, and gold is said to exist. Iron is mined and smelted by the natives in the northern Province. In certain localities there are valuable deposits of white clay, from which the people make crude pottery.

Uganda contains about as much land as the combined area of New England, New York, Pennsylvania, and New Jersey. More than one seventh of the country is under water, and the most important territory is that bordering the lakes. Besides Lake Victoria, which bounds the country at the south, are Lake Edward and Lake Albert at the west, joined by the Semliki River, and Lake Rudolf at the east. Throughout the whole Protectorate are beautiful little lakes, ponds, rivers, and creeks.

The population of Uganda is less than half that of New York City. The people number a little over three millions, of whom almost a million are the semi-civilized Christian Baganda, in whose country I now am. There are between one and two thousand whites and more than five thousand Asiatics.

The British have divided Uganda into five provinces, known as the Eastern, the Western, the Northern, the Rudolph, and Buganda. The last is almost directly

north of Lake Victoria, and borders on the Kavirondo country. It is fertile and well populated, and its people cultivate the land and raise cattle, sheep, and goats.

Mount Elgon, in Buganda, is one of the high mountains of the continent. It is an enormous volcano, the lower slopes of which are covered with forests. Although it is almost on the Equator, snow-storms frequently occur at its summit. Among the curious features of Mount Elgon are its caves, which have been inhabited for generations by the natives as dwelling places and used also as stables for goats, cattle, and sheep. The caves are never cleaned, and the manure of ages beds their floors. The stench pollutes the air, and they swarm with fleas.

The poorest part of the Uganda Protectorate is in the north. Not far from Lake Rudolf the country fades out into the desert and partakes of the character of the Anglo-Egyptian Sudan. The Western Province is high and healthful. It is a broken table-land, a great part of it a mile above the sea, rising in some places to high mountains. The country is well watered, and much of it is covered with a tropical forest filled with monkeys and other wild animals. The people are blacks who devote themselves largely to raising stock. In this same region are pygmies like those whom Stanley described as living in the forests of the Congo.

These western natives are not so advanced as those of the other provinces. Many of them go naked, and others are clad only in aprons of bark cloth tied around their waists. They embroider their bodies with scars, and some have their breasts and stomachs so cut up in patterns that they resemble Persian shawls. Some file their teeth until their jaws look like sections of a circular saw.

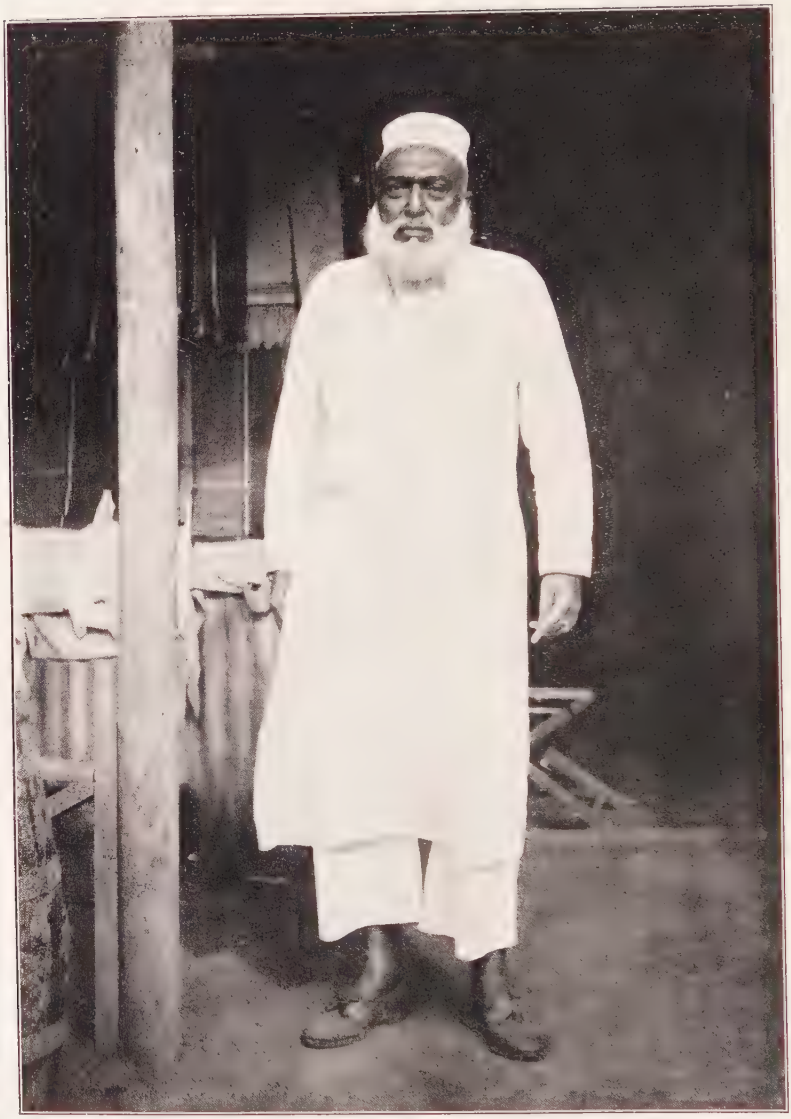
I wish Uncle Sam could come to Entebbe, the capital of the Protectorate, and see how the British handle these millions of savages. The country has about a third as many people as the Philippines, and some of them have been noted for ages for their warlike characteristics. Yet John Bull takes care of them all with a few score of officials and a small force of native black soldiers under British officers.

The officials tell me that they rule as much as possible through the natives. Each petty locality has its own system of government and its own laws, to which the central government is adapted. Affairs pertaining to military, police, postal, telegraph, and medical services are administered in common with those of Kenya Colony. The country is kept in excellent order and the people pay their taxes. Law courts have been established in all the provinces, and there is a supreme court to which appeals may be made. In some of the provinces mission schools have been established, and the people are far better off generally than before British rule. Nearly two hundred thousand natives were employed in the World War, most of them as burden carriers in transport service.

Since the British took possession of the country they have improved some of the native roads and are building others. The twenty-five-mile trip between here and Kampala, the capital of Buganda, formerly made by jinrikisha, can now be taken in a motor, or by automobile. There are roads to Lake Albert, two hundred miles away, and to Gondokoro in the Sudan. That place is the head of steam navigation on the Nile, from where one can go by steamboat and rail to the Mediterranean Sea. A regular transportation service is carried on by government motor

A regular motor-bus service is maintained between Entebbe and Kampala, twenty-five miles distant. The King of the Baganda and his court live in the latter town, which is also a centre of missionary activity.

Man-power is still so cheap that human labour is used for tasks that elsewhere would be performed with horses or machinery. But even in Africa wages have gone up since the World War.



Hindus have not only gained a monopoly of the retail trade of East Africa, but by demanding rights that the white residents are unwilling to grant, have created a serious political and social problem.

trucks, and many of the English officials own automobiles. In fact, it is said that in proportion to their white population the British possessions in East Africa have more motor-cars and trucks than any other region. Bicycles are coming into use among the richest of the natives.

Entebbe, the capital of Uganda, has a white population of about fifty, chiefly British officials and their wives. They are well-educated young people, fond of sport, and devoted to tennis and golf, which they play almost every day. Their living conditions are far better than in many parts of the interior. Their homes are one-story houses of sun-dried brick, roofed with galvanized iron and surrounded by wide verandas. They are built far apart along the wide roads of red dirt. Many of them have beautiful gardens filled with all sorts of tropical plants and trees, the most common being the Cape lily, now bearing great masses of blue flowers. Indeed, there are so many flowers and plants that one seems to be going through a botanical garden as he walks along the streets.

The government buildings are scattered here and there over the hills. They are usually roofed with sheet-iron and have brick walls and wide porches. There are no native huts in the main part of the town, and, except for the police barracks, few buildings thatched with straw. The business part of the capital is owned chiefly by the East Indians and Arabs, who have a half dozen or more galvanized iron shops filled with goods to sell to the natives. The merchants wear little yellow skull caps, calico pantaloons, and long coats buttoned high at the neck. They have yellowish brown faces, dark eyes, and curly black hair.

The mud and grass hotel in which I am staying is one of

the few in central Africa, where the traveller often has to carry his own tents or stop with the officials. The main building is about fifty feet square, and measures about twenty-five feet to the cone of the thatched roof. Its walls are only twelve feet high, but the roof does not begin for several feet above them, an air space a yard wide being left between the walls and the rafters. The main part of the hotel contains a dining-room, a parlour, and a billiard room, with kitchens off at the side.

The bedrooms are bungalow-like sheds made of mud and thatched with straw. They are some distance away from the hotel itself and surround the walls of the compound. Each bedroom opens out on a little porch or ledge floored with mud and coated over with cow dung well smoothed down. The rooms are floored with the same material, but each has in addition a rush mat made of papyrus reeds from Lake Victoria. The beds are rude frameworks of wood, on which are woven strips of antelope skins in place of springs. Rush matting is laid on top, and then a thin mattress filled with Uganda cotton. Every bed has its mosquito netting. Malaria is prevalent in this region, and no white man would think of sleeping here without such protection.

The food of the hotel is fairly good for Central Africa, although it would be poor anywhere else. The chief trouble is the cooking, which is consistently bad. As to variety, we had at our dinner last night a soup, fish, fried calves' brains, beef, potatoes, and green peas. Our dessert began with a slice of papaya, a delicious melon-like fruit that grows on trees, and ended with coffee.

CHAPTER IV

A TALK WITH A KING

I HAVE just returned from an audience with His Royal Highness, Daudi Chau, the King of Buganda Province. His subjects, the Baganda, are the most intelligent and civilized of the native races of central Africa. They go about fully dressed in cottons or bark-cloth, and consider any exposure of the person indecent. They do not mutilate their bodies by slashing them and searing them into welts and scars as do their near neighbours, nor do they wear plugs in their ears or rings in their noses. They do not file or knock out their front teeth. Since the coming of the missionaries, the Baganda have evolved a written language of their own and have produced a few books. Many of the native chiefs keep records of their court and official proceedings, having secretaries who are able to use typewriters for that purpose. The people are rapidly advancing in civilization and are to a large extent Christians.

Long the dominant race of this part of Africa, these Baganda people have, time and again, conquered the other nations about Lake Victoria, and in the past the neighbouring tribes have always paid tribute to them. They are still the most promising of the Negro races of the continent, and their king may do much in hastening their advancement.

The King of Buganda, who is also known as the King of Uganda, has as blue blood as any monarch who sits on a European throne. The Baganda are an old race, and they have had kings for generations. They say that their first king, Bemba, sprang from a monster python, whose outline is carved on one of the great rocky hills of the country. Bemba killed thousands of his subjects before he was able to rule. The best known of their kings was Mutesa, Daudi Chau's grandfather, who was reigning when the explorer Speke came into Uganda, and who was still on the throne during the expedition of Henry M. Stanley. Stanley converted Mutesa to Christianity. Daudi Chau's father was the notorious King Mwanga, one of the most bloodthirsty and wickedest tyrants of African history. Mwanga rebelled against the English, years ago, and was conquered by them. They deposed him and chose Daudi Chau, then a baby in arms, as king in his stead.

Although I might have come in the government motor car that makes the trip daily, I chose a jinrikisha for my journey from Entebbe to Kampala, the capital of Buganda. The jinrikisha was originally the invention of an American missionary who lived in Japan. It took so well there that a great part of the travel of that country is still done in it. Its use has since spread from Japan throughout the rest of the Far East, and it is common also in China and India. Some were imported into South Africa a few years ago, and an enterprising American firm soon began to manufacture them for export. Those used here are of American make. They look a little like a victoria, some of them having seats wide enough for two people. I took four for my trip, two for myself

Darkest Africa has its kinglets and princelets. The royal youth with whom Mr. Carpenter was photographed was provided by the British with an English tutor and specially educated for the exercise of the strictly limited power he will have.

Black boys push and pull jinrikishas up hill and down dale for long trips across country, and usually sing as they go. With the increase of good roads, however, these vehicles are being displaced by motors.

Not all of Africa is a jungle. Much of the land, even near the Equator, is in flat, grassy plains, which are now being invaded by the motor trucks of the white men.

and my son, and the others for our baggage and cameras.

The price paid for each jinrikisha included the services of four lusty natives. One man pulled in the shafts while the three others pushed from behind. The men were as black as jet. They were bareheaded, barelegged, and barefooted, and clad in gowns of bark cloth. They kept on the trot even while climbing the hills and sang all the way. Each jinrikisha party formed a quartet, of which the man in the shafts was the leader. The songs seemed to consist of a thousand verses of one line each. This was yelled out by the leader, and at the end the three men behind would grunt out "Karondey! Karong!" The words sound much like the croaking of bullfrogs. The singing was amusing enough at the start, but after ten miles it began to wear upon us, and we wished the singers were dumb.

We were several hours making the twenty-five miles to Kampala. The way led up and down hill over a rolling country, much of it open pasture land covered with grass and spotted with groves of trees. Everywhere were clumps of banana plants and bark cloth trees, out of which rose the round grass huts of the natives. In places we went through forests, and now and then skirted a jungle, trembling a little as we thought of the leopards, lions, and other wild beasts so common here.

The roadway between Entebbe and Kampala is about thirty feet wide, as hard as stone, and as smooth as a floor. There are ditches at the side, with culverts here and there to carry off the water, and bridges over the streams. All the roads of Uganda are kept up by the natives under the direction of their chiefs, while behind all the chiefs are the British officials. Every adult native,

male and female, is subject to a road tax of one month's work during the year. Each chief is responsible for the roads of his territory, and he calls upon every householder for the requisite amount of labour. All the way from Entebbe to Kampala I saw women and girls down on their knees pulling out weeds, or bending over and smoothing the road-bed with short-handled hoes. In one or two places men were at work, but as a rule the rough labour was done by bareshouldered, barearmed, and barefooted females, many of them clad in bark clothing. I stopped to watch them, and also took a snapshot of a shaven headed maiden with a native hoe in her hand. We went by gangs of porters trotting along with great loads on their heads and passed huge, foreign-made wagons, each hauled by sixteen or twenty lusty black fellows. The first wagons were brought into East Africa from Wisconsin by an American millionaire who had a thousand-acre ranch near Nairobi.

Kampala is one of the largest of the native towns of Central Africa. Its houses are scattered over seven great hills, which rise out of low, swampy lands, each swamp being crossed by roads and bridges. The hill upon which the King dwells is known as Mengo, that where the chief stores are and where the British governor lives is Nakasero, and the other hills are devoted to missions, schools, and private residences.

All these hills are beautiful, and Mengo especially so. It is several hundred feet high and well rounded in shape. It is covered with banana groves which shelter the thatched houses of the chiefs and officials. On the very top is the royal council house and the great bungalow that serves as the King's palace.

A TALK WITH A KING

My audience with His Royal Highness, the *Kabaka*, was arranged through the British officials, to whom I brought letters of introduction. I was escorted to the palace by uniformed native policemen and by the assistant collector of revenues. My son Jack followed in a jinrikisha behind me. We crossed the swamps on a corduroy highway, our eight black human steeds singing and grunting in chorus as they pushed and pulled us along the road up the hill. After stopping awhile at the residence of the native prime minister, a thatched hut as big as the largest hay rick, we drove on between the high fences of woven reeds that surround the homes and estates of the native officials.

After several miles of such travel, we reached the grounds belonging to His Royal Highness. They are entirely surrounded by a wall two miles long and at least fifteen feet high, made of elephant grass, a sort of cane that grows wild in Uganda. Each stalk is about as thick as a fishing rod and almost as long. The canes are so closely woven that one cannot see through this wall, and it forms a perfect protection against native prowlers.

We skirted the wall for some distance, and then came to a great cane gate at which two black attendants were standing. They had apparently been notified of our approach, for as we came up they threw open the doors. Entering, we found ourselves in what seemed a vast banana plantation. The tall plants were to be seen on all sides, their big brown blossoms standing out on the ends of the long bunches of green fruit, and their wide green leaves waving in the breeze. We rode through these groves for a while, and then came out into the King's recreation grounds, a smooth, open grass plot of several

acres. When he was a lad, the King used to go through daily gymnastic exercises out in this field and play football with the sons of his chiefs. Until he reached manhood His Majesty had an English tutor, a graduate of one of the famous schools of Great Britain, who was sent out here upon the advice of the British government to train the boy king. I understand that his royal pupil showed real aptitude for his studies and quickly learned to read, write, and cipher. He was also taught the geography and history and laws of Uganda, and he had native preachers to instruct him in the Bible and the principles of the Christian religion.

There is a dignified tone about this King's home not found in the residences of other native rulers I have seen. Passing the royal council house and the thatched huts of his retainers and band men, we came to the royal bungalow, the band playing a welcome as we approached. The King's favourite drummer stood at one side and pounded on a great barrel-like drum that reached to his waist. He used only his hands and made a great din, which was added to by that of a score of other musicians who kept time with him on their various instruments.

We were told that His Majesty would receive us on the porch, and that we should afterward go into the house. There was a chair on the porch, in front of which was a leopard skin. While we waited the servants brought other chairs for us, placing them well away from this skin. They told us that the King would sit in the centre and that the leopard skin was royalty's footstool; neither a subject nor any one other than the *Kabaka* himself could step on it.

A moment later the King appeared. As each of us was

NIGERIA
IVORY COAST
GOLD COAST COLONY
DAHOMEY
LIBERIA
Monrovia
Jebba
Katonu
Bonny
Gulf of Guinea
FERNANDO PO
CAMEROONS
RIO MUNI
EQUATOR
ST. THOMAS
Libreville
C. Lopez
FRENCH EQUATORIAL
Leopoldville
Bonia
S. Paulo de Loando
ATLANTIC
OCEAN
ST HELENA I.
TROPIC OF CAPRICORN
SOUTH
WEST
AFRICA
Angra Pequena
Cape Town
Cape of Good Hope
Scale of Miles
0 100 200 300
GENERAL DRAFTING CO. INC. N.Y.

ANGLO-EGYPTIAN
SUDAN
Taufikia
Blue Nile
White Nile
Addis Abbaba
ABYSSINIA
Harar
Berbera
BRITISH
SOMALILAND
FR. SOMALI
Jibuti
GULF OF ADEN
C. Guardafui
ITALIAN SOMALILAND
Mogdishu
Lake Rudolph
UGANDA
Lake Albert
L. Kioga
Kampala
Jinja
Mt. Elgon
Kisumu
Mt. Kenya
KENYA
COLONY
Nairobi
Entebbe
Lake Victoria
L. Edward
Ruwenzori Highlands
Stanleyville
Stanley Falls
ELGIAN
Mombasa
Pemba I.
ZANZIBAR I.
Zanzibar
Dar-es-Salaam
Bagamoyo
Tabora
TANGANYIKA
TERRITORY
Albertville
Kabalo
CONGO
Lake Tanganyika
L. Mweru
Elizabethville
KATANGA
RHODESIA
NYASALAND PROT.
Lake Nyasa
C. Delgado
COMORO IS.
Mozambique
MOZAMBIQUE CHANNEL
MOZAMBIQUE
NORTHERN
Salisbury
MASHONALAND
SOUTHERN
RHODESIA
Bulawayo
Quilimane
Beira
Antananarivo
Tamatave
MADAGASCAR
INDIAN OCEAN
CHUANALAND
OTECTORATE
TRANSVAAL
Pretoria
Johannesburg
Delagoa Bay
Lourenço Marques
SWAZILAND
ION OF
ORANGE FREE STATE
Bloemfontein
BASUTO LAND
Ladysmith
NATAL
Pietermaritzburg
Durban
AFRICA
HOPE
Grahamstown
East London
Algoa Bay
Port Elizabeth
30°
40°
50°
10°
0°
20°
30°

presented, the King offered his hand, motioning us at the same time to our chairs. He then gave directions that his favourite musician should come out and play for us. This man is a famous blind Negro, who formed a part of the court band during the time of Mwanga. He is gray-haired and old, and was naked almost to the waist. He sat down cross-legged on the ground beyond the leopard skin and played beautifully upon a native guitar. During an interval in the music I asked how the man became blind and was told that it was owing to a caprice of King Mwango. One day that king thought he played badly, and as a punishment thereupon ordered that his eyes be put out.

While the old man played, the King sat at my side, and as the music continued I had a good chance to study him. He looks like a mulatto, but his features are almost Caucasian. His skin is light brown, his forehead is high, and his lips are thin. His head was covered with a high red fez cap, much like those worn by the soldiers of Egypt. He was clad in a long white gown, fastened tightly at the neck and falling to his feet. Over this he had on a gray sack coat and vest, across the breast of which was a heavy gold chain.

The King looks intelligent, though he is very modest and rather diffident. He speaks English well, and talked a little with me in reply to my questions. At the close of our audience he brought out his visitors' book and asked me to write my name in it. I did so, at the same time handing His Highness a sheet of paper and asking him if he would not send, by me, a line in his language to the United States. I told him that we had no kings in our country, but that every boy there considered himself an American prince and the equal of any king upon earth.

This seemed to amuse the King, who laughed and said he would gladly comply with my request. He then and there sat down and wrote out this message:

Noanyuse nyo okulamusa abalenzi bona abomu United States.
Nze,
DAUDI CWA, KABAKA.

Translated, this is:

I am glad to salute all the boys who are in the United States.
I am,
DAUDI CHAU, THE KING.

Writing this letter put His Royal Highness in an excellent humour, and I asked him to step outside in the sun and have his photograph taken. He gladly complied, and my son Jack made a picture of us standing together. Shortly after this we again shook hands and said farewell. As we were leaving, the King asked us if we would not like to listen to his royal band, and sent forth directions that the court musicians were to give us a concert on our way out.

Leaving the palace, we went to the drumhouses and other thatched huts that form the quarters of the musicians. The drumhouse looks like a great inverted bushel basket. It is about forty feet in diameter and perhaps twenty feet high at the cone. It is made of thousands of reeds so tied to one another that they go up to one centre, forming a straw tent, with round rolls of reeds running about it like ribs from bottom to top. The roof is made of split canes, each as fine as a darning needle. In this house a half dozen men sat on the ground and played upon pipes. Another half-dozen pounded on the great drums with their hands, and in the back of the hut others were dancing. A moment later the King's dancers came out

and cavorted around, hopping higher and higher and swinging their legs this way and that to the pounding of the drums.

Most of the music for the dancing was made by the chief drummer, an old Negro whose head was entirely bald and whose ears had been cut off close, so that nothing but the holes could be seen. Remembering how the blind musician lost his eyes because King Mwanga did not like his playing, I asked how the head drummer came to lose his ears. The reply was that they were cut off by orders of Daudi Chau's grandfather, King Mutesa. It was a hot day, and the drummer was taking a bath in the King's lake. One of the princesses saw him and reported herself disgraced by having seen a naked man. Whether Mutesa was angry because the man bathed in the royal pond, or whether he thought it disgraceful that the princess should have seen him in the water, I do not know. At any rate, he ordered his executioners to cut off the man's ears as punishment.

Such occurrences have not been common since the British took hold, and the present King, even if he wished, would not be permitted to kill or maim his subjects. I understand that he is fond of his bands. He always has a large retinue with him when he goes outside his palace grounds. The drummers march in front, yelling and pounding on the big drums, while the people come for miles to look at the sight. The drummers play very well. They use the hollow, resonant trunk of a tree with skins over the ends. The drums are all shaped like barrels or kettles, and are of different heights and sizes. Each has its own note or pitch. The musicians sound the different notes, using a number of drums, as our people

do with the keys of a piano. Some of the King's drums are one hundred and fifty years old, and are considered invaluable.

As long as he remains on the throne of Buganda, Daudi Chau will be subject to the English officials. They are the real governors of the province and rule the natives through him. This is their policy all over Uganda. They try to preserve the authority of the chieftains over the people; and although the British fix the taxes, for instance, it is the King who sends out his edicts and makes the collections.

A royal drummer in Uganda has a life job, although in former days a king's musicians were likely to meet sudden death or suffer mutilation if they were so unlucky as to play out of tune.

In one corner of the King's grounds is a large well-built hut that is used as a guard house, or jail. The great thatched roof is upheld by palm poles, which also divide the interior into compartments.

CHAPTER V

BARK CLOTH AND AMERICANA

THE Kavirondo, whom I saw on the other side of Lake Victoria, go stark naked, and are not ashamed. These Baganda people, as I have said, are fully clad, and consider all exposure of the person indecent. A married woman who would go about wearing only the girdle of beads and the short fibre tail that constitute full dress about Kisumu would be arrested in Kampala, and the Baganda man who would strut around with only a little apron of skin tied to his waist at the back would be drummed out of the country.

The Baganda seem almost a nation of prudes, especially as far as the men are concerned. Every one of them, when not working, is clothed in long flowing garments from his head to his feet. In the time of King Mwanga the man who showed a bit of bare leg in His Majesty's presence was instantly punished, and I have already told you how the chief drummer of the present King lost his ears because a princess saw him in swimming. Old King Mutesa, who showed such anger over this incident, kept a large corps of nude girls about his palace to act as his valets. Nowadays the Baganda women are almost as fully clad as the men. Only when out working in the field may they occasionally be seen bare to the waist.

If you could collect all our Georgia coloured population together and dress them in bark cloth or in sheets of

white cotton, you would have something like the nation here at the source of the Nile. Racially, the people are Bantu Negroes. They are, if anything, better looking than our coloured people, and are far more intelligent than the Negroes about the Gulf of Guinea, from where most of our slaves came. The bark clothing many of them wear is made in great sheets of the size of a bed quilt. The Baganda man begins dressing by winding a strip of bark cloth about his hips, passing it between his legs and fastening it at the waist. After this he puts on a large sheet, which he fastens around his shoulders and often ties in at the waist. It is only when at hard labour that he is less fully clothed. When working, his lower legs are often bare. Although the women are usually clad from armpits to ankles, they do not seem to regard the exposure of their persons above the waist as immodest. I am told that many of them take off their clothes when eating inside the house, in order to keep from soiling them.

When Adam and Eve had their little trouble over the apple, and as a consequence dressed themselves in fig leaves, they set an example for many of these people of Uganda. The Baganda, however, make their clothing not from the leaf but from the bark of a species of fig tree that they raise in their gardens. Until recent years it was the sole source of wearing apparel for this tribe. I have just returned from a long trip through the country, where I have had an opportunity to see how the bark grows and how it is made into clothing.

The ordinary Baganda family lives in a thatched hut surrounded by banana plants. The fig trees are set out among the bananas. They grow to a height of from

twenty to thirty feet, their branches beginning at about eight or ten feet from the ground. The bark is cut in such a way that it comes off in great sheets. If it is properly stripped from the tree, another coat will grow, so that the same tree will yield a new crop of cloth every year. In cutting the bark, great care is taken to leave a thin film on the trunk. As soon as the outer bark is removed the trunk is protected from the elements by being wrapped in green banana leaves, which are tied tightly about it with fibre. I saw the natives doing such work in many of the gardens on my way across Buganda Province.

The bark comes off in strips from six to ten feet long and as wide as the circumference of the tree. These strips are soaked in water until they become damp and soft. They are then spread out on skin mats, hammered with mallets, and pulled and stretched. The bark is composed of many fibres that cross one another this way and that, just like the threads do in weaving; and when it is dried it seems like a sheet of woven fibres. The sheets can now be made into the blankets used as clothing, and can be painted and decorated in patterns. They feel just like woven cloth and look as though they might have been felted. The material is somewhat thicker than cotton sheeting, but it is quite as firm and almost as smooth. It is a reddish brown in colour, of about the same hue as tan bark or cinnamon.

I understand that some of this bark cloth has been sent to America and Europe and that it has been tried in Germany for making ladies' shopping bags and card cases, as well as caps, hats, and book covers. I was told by an exporter of Entebbe that he had orders for a large amount of it from certain American weaving mills, which wished

to experiment in making velvet of it. The cloth can be dyed any colour and it could be made waterproof. When it is blocked to any form it holds its shape well, and when cemented together into two thicknesses, laid crosswise, it is very strong. It might be used as a matting, and would be decorative as wall paper. As it is, there is practically no market for it other than that furnished by the natives themselves. I have bought several blankets six or eight feet square for about thirty-three cents apiece.

I wish I could show you some of these Baganda girls, dressed in their terra-cotta sheets, as I now see them around me. The bark cloth is wrapped tightly about their bodies, leaving their plump arms and shoulders bare. It is often tied in at the waist with a bark cloth sash and is gathered up at the front so that a great fold hangs over and falls halfway to the knees. It gives forth a swishy rustle as the women move, and I am told that they delight in this swish. The only weak point about the costume seems to be that the bark dress has no pins nor buttons and that there are not even shoe-strings over the arms to hold it up. The mere knot at the front seems by no means adequate, and at first I was in constant fear that it would slip and the garment drop to the ground. However, the dresses stay on as tightly as though they were glued, even when the women are bent double in the fields chopping out the weeds with their little hoes. I have seen them at work with little black babies held on their backs by folds of bark cloth.

While the grown-ups are fully clad, little girls up to the ages of eight or nine years go absolutely naked except for a ring of woven fibre or of twisted banana stems about the waist. During my trip yesterday I met a girl and

If a bark cloth tree is properly peeled it will live and yield more robes and blankets next year. Usually after the trunks are stripped they are wrapped in banana leaves to protect them from the weather.

The reddish-brown bark cloth is made from the covering of a species of fig tree grown near every hut. After soaking, pounding, and stretching, the sheets are ready for wear.

bargained with her for her outfit. She sold me her whole suit of clothes for four cents, stepping out of her waist ring and standing there naked while she handed it to me and took the money. A moment later she scampered off into a banana patch and made a new ring of banana fibres to take its place. I am told that the little ones consider themselves undressed when they have not this ring about their waists, and that if they have left it off they will run for it and put it on before they come to meet strangers.

This little girl had her head shaved close to the skin, the fashion with both women and men among the Baganda. Nearly everyone has a scalp like polished ebony, although a few allow the hair to grow. The Baganda do not wear jewellery, and the women do not pierce their ears or disfigure themselves with scars and various other mutilations, as is common among most African tribes. Those whose hair is long do not load it with grease as do some of the neighbouring peoples about Lake Victoria, and, as a rule, the Baganda are noted for their cleanliness and their fondness for bathing.

Since this country has been opened to Europeans many of the natives have begun to wear cotton, and, strange to say, they prefer American sheeting, called Americana, to any other. These goods come made in the usual length for one dress. Both men and women wear such sheets, so that any large crowd forms a mixture of white and tan; the white is the American cotton and the tan the bark cloth.

Most of the natives of Uganda are fine looking. They are well formed, though shorter than the average Caucasian, the men being not more than five feet four or five

inches tall, and the women still less. The younger women have beautiful necks and arms and very full breasts. Many of them look like ebony statues, while almost every girl has a figure that would be coveted by any American belle. Both men and women are broad shouldered and deep chested, and they stand erect with shoulders thrown back. This may be due partly to the hilly nature of the land and also to their habit of carrying things on their heads. During my trip across the country I passed men trotting along with firewood, bunches of bananas, and bales of hides balanced on cushions of leaves upon their crowns. I saw women carrying gourds upon their heads, so carefully poised that the water they contained did not spill. Now and then we passed a girl with a glass bottle balanced on her pate, and at one place I saw a gang of porters carrying head loads of elephants' tusks.

CHAPTER VI

KING MUTESA'S TOMB AND HIS BALD-HEADED WIDOWS

THERE are two great monuments in Kampala that emphasize the changes now going on in Uganda. One is the tomb of the tyrant Mutesa, who was ruling these millions of semi-civilized natives when Stanley came here. It is guarded by a score or more of his bald-headed widows, who are fated to watch his coffin to the day of their death. The other is the mighty thatched cathedral of Namirembe, put up by the natives, which forms the centre of the modern Christian movement that has converted this nation. It is the largest native church on the African continent, and thousands of Negroes worship in it.

But come with me first to take a look at the tomb. Lying here a few miles from Lake Victoria, on a great hill opposite Kampala, it is like none other on earth. I have visited the graves of the Pharaohs, and have wandered among the tombs of the Ming emperors in China, guarded by giants, elephants, camels, and lions cut out of stone. I have seen at Agra, India, the Taj Mahal, the most beautiful monument ever erected. I have stood before the other great tombs of the world—the enormous structure in Java known as the Boro Budur, near which stands the famed stone goddess of the beautiful hips; the wonderfully decorated temples at Tokio, Japan, in which lie the Sho-

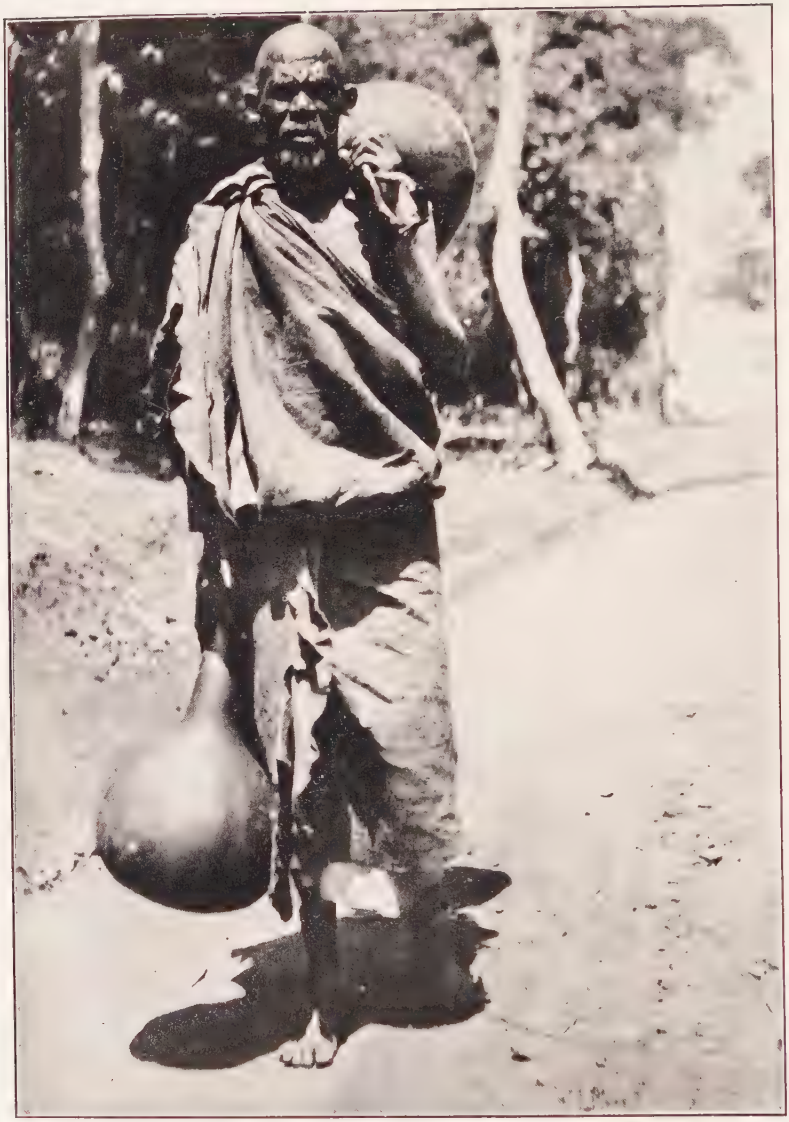
guns, and the Hotel des Invalides in Paris, where rests the body of Napoleon Bonaparte.

This tomb of Mutesa is different from all of these. It consists of a hut shaped like a haystack and as high as a four-story house. It is a great tent of thatch attached to a framework of reeds and upheld by hundreds of poles. The reeds are tied together into bundles, and are woven together as intricately as the finest of basket work. In some places the design looks like mosaic. The reeds were originally white, but the smoke from the perpetual fires within has turned them as black as Mutesa's widows, for whom the tomb forms a home.

Accompanied by my guide and a single native soldier, I made my way inside. At first it seemed as dark as night, but as my eyes grew accustomed to the gloom I could see about me. The floor of the tomb is thickly covered with cut grass. The poles that support the roof are so arranged that there is a wide aisle through the centre, and exactly in the middle, under the apex of the cone, lies the coffin, guarded by spears fixed upright on each side of it. In front of it are shields of copper and brass, while at the back are huge curtains of bark cloth. Squatted around the coffin and seated here and there on the grass in different parts of the hut were groups of old women. All had blankets of bark cloth wrapped about their bodies, covering their breasts, but leaving the arms, shoulders, and necks bare. They were barefooted and bareheaded, and with two exceptions their heads were shaved close to the scalp. All were dark brown or black and had Negro features. With the aid of my guide I was able to persuade a number of them to step outside into the sunlight, where for a little money they consented to pose for a photograph.

When a Baganda king dies, all his widows become virtually prisoners, and are compelled to spend the rest of their lives in a house by themselves that is always kept under guard.

Many huts of Uganda look like hay-stacks. They are usually circular and consist of a frame-work of poles interlaced with reeds and covered with a heavy grass thatch that extends out over the door to form a front porch.



There are three kinds of "doctors" in the backwoods Uganda villages. One is a poisoner, hired to dispose of enemies, another is supposed to cast spells, while the third is an old man who has gained real knowledge of curative herbs.

The widows had been so long in darkness that their eyes were almost blinded by the light, and it was only after a number of trials that I got a good picture.

These women were all wives of King Mutesa, and, following the custom of the country, upon his death they took their places about his coffin to guard his body for the rest of their lives. The native government allows them a certain amount of food and drink every day. I understand that there are a score or more of similar tombs in the near-by country, each containing the body of a king who reigned years ago, and each guarded by widows thus doomed to a living death.

I spent some time around the tomb. The women were interested in me for a while, and then went back to their seats in the dusk. Here one sat and rocked to and fro; there another crawled over the grass, smoothing it out on the floor; farther over a third stretched herself out and slept. It was one of the most dismal spectacles I have ever seen, and every one of the black crones seemed a figure of despair.

From what I have learned from the missionaries, the funeral of King Mutesa was less barbarous than were those of his predecessors. There were no human sacrifices at his death, and he was buried with his under jaw intact. In the past, a dead king was wrapped in bark cloth by the prince succeeding him, who, with the official executioner and the keeper of the king's tomb, carried the body to its resting place. There the executioner cut off the jaw and laid it carefully away in a wooden bowl. After that the tent-like grass tomb was built and earth banked up around it to prevent the surface water from flowing in. Then the body, minus the jaw, was again

wrapped in bark cloth and laid on a bedstead in the centre of the tent, and the door closed. Immediately following this came the sacrifices. Three men and three women were seized and slaughtered in front of the door, and their bodies were left there to be devoured by the vultures. The three men who were killed were usually the king's cook, the man who had charge of his beer mugs, and his chief cowherd. After this the jaw was placed in a hut built near by, and a chief was made guardian of it. Another chief became guardian of the tomb itself, and he and the widows took up their residence in it.

Before King Mutesa died, he ordered that the human sacrifices be omitted, so his cook, his beer man, and his chief cowherd went free, but he made no provision for exempting his widows from living out their lives in his tomb. Some years previously King Mutesa had ordered the killing of two thousand innocent men, women, and children in one day, as a sacrifice at the tomb which he built in honour of his father. Had it not been for the influence of the missionaries, his own death would probably have been followed by a similar slaughter.

Since I came to Uganda I have heard many stories about old Mutesa. He was a mighty monarch, governing a million or so people. He held his court here at Kampala, and the neighbouring peoples recognized his power and paid him tribute. He had scores of wives, but the few now watching his tomb are all that remain. During the earlier part of his life he had a playful way of reducing his family whenever he became drunk. At such times he would take a spear and stab at his wives right and left. I was told of a picnic he once gave, at which all the ladies of his harem were present. One of the prettiest

of the girls in the party, thinking to curry favour with her royal husband after the manner of Eve, plucked a piece of fine fruit and offered it to him. The King thereupon denounced her for her familiarity and was about to beat her to death with his club, when Speke, the explorer, who happened to be present, ran in and saved her.

At that time the king had the right to take any woman in the country, and, no matter how many deaths occurred, his harem was kept full. His Majesty was supposed to marry only the daughters of chiefs, but if he fancied other girls he had the chiefs adopt them, so they might be brought into the palace according to law. The sending of a pot of native banana beer to the father of a girl was a hint that the king desired one of his daughters, and the maiden specified was at once brought to the palace. If she proved true to His Majesty and he did not kill her in one of his fits of anger, she was on the whole fairly well treated and had a chance to share in his death watch. On the other hand, if the girl was not true to Mutesa and sneaked away to another lover, she was terribly punished. The old penalty for such a crime was that both offenders should be chopped up alive, somewhat after the slicing process once common in China. All such penalties have now been abolished, and infidelity, if punished at all, is passed upon by the native courts.

As to Mutesa's cruelties, Apolo Katikiro, Daudi Chau's old prime minister, told how one of his wives was killed for speaking too loudly in the royal presence. The King, angry at the woman for her presumption, straightway ordered that her nose and ears be cut off, and finally her head. This sentence, so Apolo Katikiro said, was car-

ried out in the midst of the court crowd, and the soldiers laughed as they did the King's bidding.

An even more brutal beast than old Mutesa was King Mwanga, who succeeded him. He reigned after the missionaries had come in, when the people were to a large extent converted to Christianity. Mwanga was at times much opposed to the missionaries, and tortured the Christians among the natives, cutting off the arms and feet of some and roasting others to death over slow fires. He killed several of the white missionaries and acted so outrageously that he brought about a civil war in which the native Catholics and Protestants fought with each other. For a time the country was under the control of the Mohammedans. The King himself was notoriously weak and notoriously bad. The orgies of his palace were so disgraceful that they cannot be described, and the people themselves were glad when he was deposed, as they feared he would corrupt and destroy the whole nation.

Returning to the gruesome subjects of burials, I find the customs of the common people of Central Africa quite as interesting as those of the kings. During my travels in Uganda I see graves everywhere. The people bury the dead in their garden, a common place of burial being in a corner or in front of the hut. The graves are usually dug among the banana plants and are often covered with dried grass or banana fibres. The corpse is washed with the pulp squeezed from the stem of the plant, and is wrapped in bark cloth. Sometimes a house is built for the mourners who are not members of the immediate family of the deceased. The mourning period usually lasts a month, at the end of which time all disperse and go to their homes.

The natives of the Buvuma Islands, in Lake Victoria, bury their dead in much the same way. They also erect shelters over the graves. These are miniature huts in which the spirits are supposed to live, and are renewed from time to time when in need of repairs. Graves are also often marked by planting trees over them.

The Wassakumas, who come from the lower part of Lake Victoria, bury their dead clothed in cattle hides. The body is wrapped up in the skin of an animal just killed, and the grave is dug right in the centre of the cowyard. The meat of the slaughtered beast is roasted and eaten at the funeral feast, which, if it is that of a well-to-do man, ends in all getting drunk on banana beer, which they suck through straws from their gourd steins. Men so poor that they own no cattle and women and boys are often buried in leaves.

The Bazibas have public cemeteries in which they bury their dead. The common people, when they die, are wrapped in bark cloth and placed in deep graves, after which a tree is planted over each to mark the resting place of the deceased. The chiefs are buried in a sitting or standing posture in holes dug just deep enough to leave the head of the corpse sticking out above the surface. Sometimes an earthenware pot is placed over the head to protect it, but usually there is no covering of any kind. Sentries are set to watch the grave night and day for a period of two months. A brother of the dead man comes to it once every day to see that the watch is properly kept, and that the head does not suffer from the attacks of birds, wild beasts, or even the domestic animals belonging to the village. At the end of the watching period the head is buried and then a new chief is elected.

As for the former dwellers on the Sese Islands, they are said to have had but few burial formalities, the dead being interred in the stomachs of the living! Even since their transfer to the mainland, and despite the efforts of the government, the ghoulish practices are said still to persist to some extent. The notorious secret society of ghouls, known as the Bachichi, whose members eat the dead, originated on the Sese Islands. There are branches of the society in Uganda, and the custom is said to be common in other places in Africa. I have heard that the ghouls of the Sese Islands sometimes carried sick people off into the bushes and knocked them on the head in order that they might be the sooner made ready for the table. Their practice is so well known that many of the Christian natives keep watch over the graves of their dead for eight days after burial.

Dr. J. F. Cunningham, who was long a British official in Uganda, says that the Sese people wrap their dead in shrouds of bark cloth, then lay them on wooden frames above the ground far off in the forest, and do not visit them again. The presumption is that they will be taken care of by active members of the ghoul society. A Tanganyika friend tells me that the bodies are usually eaten by the family and relatives of the deceased, and Sir Harry Johnston, in his book on Uganda, speaks of a Sese Islander who killed his wife on their wedding night because she refused to cook the thigh of a man buried the night before, which he had dug up to celebrate their marriage supper.

I have heard from another traveller that in certain sections around Lake Tanganyika, where the people of the different villages are closely related, when a man dies his family at once sends word to the relatives in the neigh-

bouring villages to come and take possession of the body. They do so, usually carrying it off in a sack, and then prepare a feast at which the dear departed is the *pièce de résistance*. The body is cut up and roasted over the fire, or boiled with bananas in an earthen pot. No resident of the village to which the man belonged is allowed to join in the horrible feast, and the family of the dead are not permitted to be present.

According to Doctor Cunningham, the Manyema, until not long ago, accompanied the burial of their chiefs with human sacrifices, ten living women being buried in each grave. The legs of the women were broken at the knees and their arms at the elbows, and they were then laid flat in the grave with the dead body of the chief on top of them. After this ten live men whose arms and legs were broken in the same way were placed on top of the chief, and the grave was then filled up.

CHAPTER VII

THE NAMIREMBE CATHEDRAL

IN STRIKING contrast with the barbarous tomb of Mutesa is the Namirembe Cathedral, erected by the Christian population of Uganda. The cathedral, which is named for the hill upon which it stands, is situated about three miles from the town of Kampala, and can be seen far and wide. My first glimpse of it was on my way inland from Lake Victoria, when I thought it must be the palace of the king.

For years the Namirembe Cathedral has been the rallying place of native worshippers and foreign and native missionaries. Frequently destroyed, it has been successively rebuilt, each time bigger and better. The first church, which was erected many years ago, was flimsy in comparison with the present one. It consisted of a vast wattle of mud-daubed thatch, supported by a forest of palm trees, the trunks of which had been cut down and sunk into the ground. The interior looked like a wood through which a forest fire had swept. There were no walls, but curtains of straw matting were let down at the time of worship, and here and there was a little enclosure of plaited twigs smeared with mud from the ant hills. It was constructed by the natives themselves, all of whom worked without pay. If each had received wages of six cents a day, the labour cost alone would have been five

Many of the blacks of central Africa still participate in the wild spear dances, but the missions established throughout central Africa are succeeding in greatly diminishing these barbaric practices.

The universal native weapon of East Africa, both for hunting and for fighting, is the spear. The young warriors used to be encouraged to stab their victims many times so as to become hardened to bloodshed.

thousand dollars, an enormous sum from the standpoint of these sons of Africa.

A short time after that church was built it was destroyed in one of the terrific thunderstorms common to this part of the world. Another cathedral was then erected and later dedicated in the presence of several thousand natives. It was used as a place of worship for several years, but one morning the whole building dropped to pieces like the old deacon's "one hoss shay." It was then found that the white ants had been the little devils that did the job. These ants eat wood and love to work in the dark. They had made a royal feast of the palm tree poles that supported the roof, and seemed to have worked systematically, for all the poles went down together, crumbling into dust and dropping the roof to the ground.

Undaunted, the natives set to work once more and this time made a cathedral that became famous the world over. The church was an enormous structure of sun-dried brick of a rich red colour, with walls about fifty feet high and of great thickness. The roof of velvety thatch was beautifully fitted to the walls, and sloped upward to a curved ridge terminating in three spires. It was so large that it took more than two hundred tons of elephant grass to cover it. The grass was laid together in bunches and so tied with black shrubs from the swamps as to give a decorative effect.

The interior was a symphony of white and black and dark red. The floors were of sun-dried bricks like the walls, and the roof was upheld by many red brick columns. The building was in the shape of a cross, with a great nave sixty feet wide, and with a chancel for the choir at the front. During the preaching the natives sat cross-legged

upon skins and mats that they brought with them. They were especially delighted with the sonorous notes of the organ, which had been carried for many miles over mountains and swamps.

When the building was dedicated the people gave all sorts of offerings, including cows, goats, fowls, and eggs. They brought in bushels of cowry shells, which were then used as money, and also some actual coin, representing quite a fortune for this part of Africa. In addition there were offerings of war drums, spears, lion skins, elephants' tusks, hippopotamus teeth, and bales of Manchester cotton goods. But in 1910 fire destroyed this work of love and worship, and a bit later the natives once more set to work to rebuild their great house of prayer.

The cathedral of to-day is unsurpassed by any Christian church on the African continent, having cost in the neighbourhood of a quarter of a million dollars. It accommodates about seven thousand worshippers, and adjoining it are schools for native boys and girls, and a training college for native teachers. Near by is the Church Missionary Society Hospital, founded in 1897, which is famous throughout Central Africa. It is a large establishment with all modern sanitary conveniences and the latest appliances. It is very successful in its treatment of tropical diseases and is doing a great work independently of the mission with which it is connected.

It was Henry M. Stanley who first brought Christianity into this part of the world. When he came here in 1875 he was well received by Mutesa. He urged the King to adopt the Christian religion, translated the Ten Commandments and the Lord's Prayer for him. The King became so interested that Stanley wrote a letter to the

London *Telegraph* begging the English to send out missionaries. He spoke of Uganda as the most promising field in the pagan world and advised the English to cultivate it. This letter was given to a Belgian messenger, who was killed on his way down the Nile. A government expedition was sent out to look for him, and when his body was discovered Stanley's letter was still hidden in one of the boot legs. It was forwarded to "Chinese" Gordon at Khartum, who sent it on to the *Telegraph*. Three days after it was published, an anonymous gift of twenty-five thousand dollars was offered to the Church Missionary Society of England to begin work in the Uganda field, and twenty-five thousand more was added shortly thereafter. As a result, eight young men were sent to Zanzibar, whence they came overland to Lake Victoria. Others came south by way of the Nile, and within a short time the work of Christianizing this nation began in earnest.

All this happened many years ago, and now practically all the Baganda, or one third of the total population of Uganda, are Christians. The head of the Church Missionary Society here tells me that to-day Uganda has several hundred Protestant churches built by the Negroes, and several hundred native evangelists, who are going about over the country doing mission work. Several thousand native Protestant preachers, supported by the Negroes, hold regular services every week. In order to promote attendance at worship, the markets are kept closed on Sundays. The people are usually called to church by the beating of a drum.

In addition to the Protestant movement, which is by far the largest, much has been accomplished by the Catholics. The White Fathers, a famous French clerical

order, have established native churches over the country and maintain a large mission station here. The Mill Hill Mission, also Catholic, and directed largely by Irish priests, is doing a great work through its churches, hospitals, and schools. The converts of these two missions, usually marked by the little crosses that they wear on strings around their necks, are to be seen everywhere. One of the mission heads told me that the relations between the Protestants and the Catholics are good and that the field is still large enough for all denominations. Said he:

"I am glad to have the Catholics do what they can. We are all working to benefit the natives, and we all believe in the Creed, the Lord's Prayer, and the Ten Commandments."

This mission work has to a large extent eliminated the savage customs common here in the past; slavery has been abolished, and the kings and chiefs cannot maim or kill their subjects. The natives as a rule have each but one wife. Many of their children are now being sent to school and taught the three R's. Both the Catholics and Protestants conduct manual training schools and there is also a high school here at Kampala.

Among certain tribes the women are not supposed to wear coils of wire about their necks until they are married. While single they are expected to be content with a few necklaces and bracelets.

Among most tribes the women carry the burdens and do the heavy work, while the boys and girls herd the family live stock, if any; but men who work for their families are rare.

CHAPTER VIII

THREE-DOLLAR WIVES

DO YOU want a cheap wife? You can get one here in Kampala for three dollars, or, to be more exact, for three dollars and thirty-three cents, and there are thousands now on the market for just that much and no more. The rate has been fixed by the *Lukiko,* the native royal council, and the man who bids higher will be fined. At the same time, the parents who demand more are liable to a fine equal to the price of their daughter. So you see everyone has a fair show. According to the laws, a girl should be at least seventeen before she is wedded, and as there are two million souls in Buganda Province, a big crop of brides comes on the market every year.

Take, for instance, a girl in the marriage mart whom I sized up to-day. I never travel without a tape-line in my pocket, and so I can give you her measurements. She was just five feet one inch in height, and thirty-five inches about the bust. Her skin was of a rich mahogany brown and was oiled until it shone. From armpits to ankles she was clad in a bark blanket, wrapped tightly about her body under the arms and tied by a cord at the waist. Her neck and shoulders were as smooth as though cut by a sculptor, and she had beautiful arms. Her teeth were sound, firm, and as white as ivory. I cannot describe her hair, for her scalp was shaved close to the skin and she

had evidently just left the barber. Her little brown ears were especially prominent on her shaved head. Through my guide, Epifras, or Sassafras, as I call him, I discovered her age. She is exactly seventeen, and is about to be married. The girl told us that her prospective husband was twenty. Evidently proud of her approaching wedding, she simpered a little in talking of him. Sassafras says it is really a love match and that such are common in Uganda.

Girls and boys go around hand in hand, and there seems to be considerable affection between the young men and young women. It used to be that a man could have as many wives as he pleased. King Mutesa had his hundreds, and until lately every chief had his harem. But, as I said before, after the country was converted to Christianity, polygamy was practically abolished, and now the rule of one wife prevails, except among the native Mohammedans, who are each allowed to have four.

There is no seclusion of women in this part of Africa. The boys and girls play together. If two fall in love, the girl takes the young man and introduces him to her aunt. In due time he is presented to her father and mother, who examine him carefully, and, if they like him, consent to the marriage. The man pays the price and gets his girl. After the marriage, which takes place in church, the two go off together. All marriages are registered, and if there is any dispute between the two this registration entitles them to have it settled by the courts. Divorces are not infrequent, the common complaint of a woman in such affairs being that her husband's love has cooled or that he is making eyes at some other woman.

There is considerable complaint throughout the country

at the fixed rate for wives. Parents say that it is not just that a man should pay no more for a beautiful girl than for an ugly one, and that matters of age, intelligence, and family ought to be worth consideration. The grooms say the same. It was different in the past, and even now, I believe, a chief pays more for his wife than does an ordinary man.

Among the queer Baganda marriage customs are those regarding the man's mother-in-law, who seems to be more unpopular here than with us. The wife's mother has no rights that her son-in-law is bound to respect. She cannot speak to her daughter's husband unless he first speaks to her, and if she should meet him accidentally, she must turn aside and cover her head. In case she is not wearing enough of a skirt at that time for the purpose she may sit down by the side of the road and cover her eyes and face with her hands while her son-in-law passes. She dare not enter her daughter's house without a special invitation, and she is not supposed to stay long when she comes. If she wants to see her daughter she steals up to within fifty feet of the house to wait until the girl happens to come outside. The two then may talk together. If the mother-in-law, standing outside the hut, wants to greet her son-in-law within she may yell out in the native language, "How are you?" The man, if he is in a good humour, may respond with "All right, mamma," but he would consider it beneath his dignity to come outside to return the greeting.

Sassafras tells me that many of the women I see here who have let their hair grow are widows. Frequent shaving usually keeps the heads of the marriageable girls as smooth as a billiard ball. But a widow, to show her grief,

is not supposed to cut her hair until two months after the death of her husband, while if she is overwhelmed with despair she may even let it grow for five or six months. I have already written of how scores of widows of kings are spending the rest of their lives watching in the tombs of the dead rulers of Uganda.

As to the children, I see little black babies everywhere, many boys dressed in bark clothes, and little girls almost naked. I am told, however, that this is a land of small families. The average couple does not have as many children as even the rich of Europe and the United States. The woman who bears several children is the exception rather than the rule, while many of the families have none. Indeed, the birth of a second son is always an occasion for pride and rejoicing. The fact is announced by drumming outside the hut, which may be continued at intervals for a month. This is a sign that there is joy within, and that the couple's friends should come in and drink some banana beer to the health of the new arrival. The mother who has a second son is entitled to a new dress for having brought this honour to the family.

I like the looks of these babies. They are bright little brown things, good natured and full of smiles. While working in the fields, the mothers carry them on their bare backs inside their gowns and the little ones bob up and down as mamma wields the hoe. Sometimes they are tied inside goatskins and thus carried. The men often go along with babies astride their hips, and I occasionally see one with a pickaninny riding on his shoulders.

These Uganda people live happily, and have homes that are comfortable from the African point of view. They live in villages scattered over the country, each village

The Baganda are poor farmers, and consequently live mostly on bananas. They use no implements but crude hoes, have no idea of ploughing, draining, or irrigation, and know little about fertilizers.

In the towns under white men's supervision the blacks are required to live by themselves and to maintain their huts and surroundings in a fair degree of cleanliness.

While there are good roads in the white man's territory, in the remote districts only trails and paths exist, so that hunters or explorers must employ trains of porters to carry baggage.

covering a large area. Every hut has its garden about it, in which bananas, sweet potatoes, and other vegetables are grown. As a rule, the tall banana plants shade the huts, and one often walks quite a distance through a banana plantation before he gets to the house. Out in the country the huts look much like little haystacks about twelve feet in diameter and twelve feet high, except that each has a sort of projection like a hat brim, which extends out and shades the door. They are made of reeds with thatched roofs, upheld by poles.

The houses are of different sizes, those of the chiefs being of great extent and most elaborately made. Every hut is divided into several rooms by walls of matting and bark cloth. Even the poorest house has two apartments, one at the front and the other in the rear. In the rear apartment are bunks around the wall upon which the people sleep. Such huts have but few furnishings; two or three stools, a half-dozen earthenware pots, and some wicker or grass baskets constitute an outfit for beginning married life. If, in addition, a woman can have a hoe or so and a scythe, she is fully ready to assume her part of the contract.

The staple food is the banana, which is more important in Uganda than are wheat and corn with us. There are many varieties. The principal one is a banana much longer than any that comes into our markets. It is a sort of plantain. It is eaten green, the fruit being first peeled and then cooked with a little water in an earthenware pot. As it steams away the flesh soon softens to a mass of mush. When done it is taken off the fire and turned out upon some fresh banana leaves that serve as a tablecloth. The family now gathers around and gets ready for the

meal. Each first washes his hands, giving them a shake to get off the superfluous water. The father then takes a knife and divides the pile of banana pulp into as many portions as there are persons at the board. Meantime a bowl of soup or fish gravy has been placed inside the ring. This is used in common. Each person takes up a handful of banana mush and kneads it into a ball just big enough to make a generous mouthful. He then dips the ball into the soup, and with a wonderful sleight-of-hand movement conveys it to his mouth without dropping a bit of the grease. By the time the banana mush is all eaten the soup bowl is empty.

These people grow also Indian corn, peas, beans, and sweet potatoes. They raise chickens, sheep, and goats, and occasionally have meat to eat. They do not seem fond of eggs, and the women are not allowed to eat them after they are married. Neither are they permitted to eat chicken or mutton, such viands being reserved for the men of the family. They may, however, eat beef or veal.

The Baganda catch fish in Lake Victoria and in the numerous streams. They eat locusts, and are especially fond of white ants, which they eat both raw and cooked. The ants are caught by smoking their hills about nightfall and trapping the insects as they come out. I have seen them for sale in the markets, at about two cents for a handful wrapped in banana leaves.

The natives are now making sugar from cane and growing tomatoes. They use many roots as food, as well as a green vegetable much like our spinach. Here and there I have seen little fields of tobacco, which grows in the red soil without much cultivation. Both men and women smoke. Coffee grows wild in this region, and while the

natives chew the berries they have not yet learned to use it as a drink.

Since the British have taken possession of Uganda they have introduced many new kinds of food, and have gradually created a market here for European goods. Some of the natives are now using tea, while jams and biscuits are coming into demand. This is, of course, among the wealthier people, especially among the chiefs, who buy these things to serve to their guests. Another article that is becoming common is the umbrella. I often see well-to-do native men and women going along with umbrellas in their hands.

Within the past few years the missionaries have taught many of the Baganda to write, and a demand for writing paper has been created. The people want cotton goods and, as I said before, they especially like our American sheeting. Little stores are now springing up in the more thickly populated centres, and there are a score or so of such establishments here and at Entebbe.

Indeed, the British are gradually making a new nation of the Baganda. Not so long ago that tribe was warring with its neighbours and enslaving the tribes about. Mutesa had a large army, and his predecessors waged many wars. Justice was then practically unknown, and human life was of no account. The people had no incentive to work. They lived upon the bananas that grew in their gardens; they made their clothes from the bark of the fig tree, and their house-building materials came from the cane of the swamps near by.

To a large extent, such conditions prevail to-day, but the people want better homes. They are beginning to use kerosene, and the huts of the chiefs are lighted by

lamps. Some now have little patches of carpet, while not a few are buying furniture. Our shoes and stockings are beginning to be worn. In fact, the desire for foreign things, especially articles that are showy or gaudy, is becoming an incentive to work. This movement is slow, and the low wages, amounting usually to a few cents a day, are not very stimulating. But as time goes on this will change and there will some day be a good working population in this rich and fertile country.

So far, it has been the government's policy to grant but few concessions for the exploitation of the province. The lands are held by the natives and by the English government. Some of the chiefs own large tracts. The native prime minister, for instance, has about one hundred square miles of land; he owns one thousand head of cattle, and has an income of more than five thousand dollars a year. Other chiefs have similar tracts, and the King himself has considerable property. All forests more than two miles square are supposed to belong to the English crown. The timber is especially valuable, and the possibilities for growing rubber trees are promising. At present the British government is planting rubber trees along the principal roads. All the way from Entebbe to Kampala I saw trees carefully set out and protected by fences of wicker or cane. The natives who work the roads cultivate these trees, which are now growing luxuriantly.

CHAPTER IX

A NEW COTTON BELT

THREE million blacks live in Uganda, and many of them are now raising American cotton. In a territory as big as Alabama, Louisiana, Mississippi, and South Carolina combined, these African highlands have some of the best cotton soil known to the world. Moreover, the country is controlled by the British, who manufacture for export more cotton goods than any other nation on earth, and are therefore greatly interested in developing new sources of raw cotton supply.

These are some of the conditions that may make Uganda one of the world's chief cotton lands of the future. Cotton was first raised here in 1872, when Sir Samuel Baker produced a small crop from Egyptian seed, but it was not until 1904 that any serious effort was made to establish the industry. In that year the British government imported several varieties of seed for experimentation, and a year or so later eighteen thousand pounds of lint cotton were sent to England. The area planted to cotton is now almost two hundred thousand acres, and the crop amounts to twenty million pounds in a season. The exports of cotton already exceed a value of four million dollars a year, and there are thousands of acres of potential cotton lands that await only clearing.

This is an example of what a government can accomplish in the exploitation of an industry in a far-away

colony. The British are doing all they can to teach the natives of Uganda to farm. They have inaugurated a policy of seed control, and there is free distribution of cotton seed for commercial planting. Trained native inspectors travel over the country demonstrating the correct methods of cultivation, and as a result the quality of the crop is steadily improving. The British East Africa Corporation, which receives an annual grant from the British Cotton Growing Association, is even more active than the government in promoting the industry in Uganda.

White settlers have not gone into cotton growing extensively, not only because the return is small, but also because white men cannot stand the climate in the sections where cotton can be grown. Practically all the crop is produced by native farmers, and there are thousands of little plantations devoted to it. In most places the fields are less than an acre in size; and in many they consist only of little patches among the bananas growing about the houses. In spite of poor cultivation, the cotton grows well. I have walked through fields where the plants were higher than my head and have pulled the lint from fat bolls surrounded by weeds.

Since free seed is furnished to the native, and as he has no wages and practically no taxes to pay, he feels that almost everything he gets from his crop is clear profit. He is inclined, however, to expect Nature to do all the work for him, and is not much interested in scientific farming methods. The average production per acre is still below one hundred and fifty pounds, but the British government keeps eternally at it, and improved methods of cultivation are slowly making their way. The agri-

cultural department maintains a plowing school for the natives, and all the principal chiefs in the cotton areas now own plows. Sowing is done from April to July, harvesting from October to January, and marketing until the end of March.

In Uganda, cotton is the black man's money crop. Before the government assumed control of its marketing, he was obliged to accept any price that the Indian trader was willing to offer. Now that numerous market places have been established at important trading centres throughout the cotton area, where government officers specify the prices to be paid, the native is reaping an ever-increasing benefit from his labour.

A number of gins have been built in the cotton area, largely by Britishers and East Indians, who handle and ship most of the crop. In the big plant I visited in Kampala, I met a manufacturer of ginning machinery who has been over our cotton states and claims to know all about American cotton. He told me the cotton here, although grown from our seed, is superior to the same cotton raised in America, and that it is as good as any of our upland product.

In the past it was no simple matter to set up machinery of any kind in this part of the world. Until the Uganda Railway was completed, everything was brought in on the heads of black porters, and no piece weighing more than sixty or seventy pounds could be carried over the long journey of eight hundred miles from the seacoast to Kisumu on Lake Victoria. In the hydraulic press in the big gin at Kampala there is one cylinder that weighs two and a half tons, and it almost broke down the boat on which it was carried across the lake. The cylinder was

dragged inland by a traction engine from the landing place nearest to Kampala.

While I was in Omdurman, in the Anglo-Egyptian Sudan, I saw half-naked Negro women sitting flat on the ground taking seeds out of the cotton with little hand gins that looked like clothes wringers. The lint passed between rolls no bigger than a broomstick, and the process of removing the seeds went on as slowly as in the United States before Eli Whitney invented his machine. The Kampala gin is as well equipped with machinery as any in our Southern states, and the cotton is efficiently handled. The ginning machines are located on the second floor of the plant, a two-story structure of sun-dried brick, so that the lint can be dropped down below. Near the ginning rooms are the warehouses, where there are now several hundred thousand pounds of cotton ready for ginning. All this has come in within the last few months, and more is arriving by the hundreds of bags every day.

While at the plant I saw scores of natives trotting along with great bags of cotton on their heads, and wherever I go I meet men carrying cotton. It is put up in banana bark and bound over and over with banana fibres so that it cannot fall out in transit. Each bundle weighs about seventy pounds, which is a good load for a native. The men who bring it in are usually dressed in the popular Americana, but some of them wear bark cloth. Outside the warehouses were a score or so of natives who had just sold their cotton. Each had a handful of money, and they were chatting in lively manner, planning, I suppose, what they would buy at the stores of Kampala.

The prevailing method of transporting cotton on the hoof and the head has proved a rather serious drawback

Although the Ugandans are producing some twenty million pounds of cotton a year for British mills they grow it in such tiny patches that often a man can carry his entire crop on his head.

The native bricks are made from the clay of which the ants build their giant houses. When pulverized and mixed with water this clay acts as a natural cement.

Sisal hemp was first introduced by the Germans from Mexico, where it is largely grown to furnish binder twine for the American wheat harvest. It is proving well suited to the climate and native labour conditions of East Africa.

in more ways than one. In the first place, it exposes the product to rain and dirt. Then again, getting the crop from field to market and later to the gin takes thousands of native porters just at the time when labour is needed for other farm work. Besides, while this labour is cheap, the wages being around five dollars a month, the system is slow and inefficient. Some of the more progressive planters have bought carts, however, and conditions are being further relieved by construction of roads connecting Kampala with the principal districts, and by the employment of motor transport service, especially in carrying the bales from the gins to the railroad stations and the steamship docks.

The railway from Kampala to Port Bell, about eight miles away on Lake Victoria, furnishes an outlet for some of Uganda's cotton. The Busoga Railway, controlled by the Uganda Railway and of the same gauge, runs from Jinja, on Lake Victoria, to Namasagali, a point on the Nile below the rapids. That road was built to handle the cotton output of the regions around Lake Kioga, and forms a rail connection between that body of water and Lake Victoria.

While at the Kampala gin I went through the mud houses erected for the men and more especially for the Hindu clerks employed. They are rude one-story affairs and can hardly be compared with the homes of our factory workers of the South.

Just outside the gin a number of natives were making bricks. The clay looked to me as though it had come from the hills of the white ants. It lay in a pile on the ground and men and women squatted about it pounding the clods into dust with clubs. In a pool near by another

gang was mixing the dust and water together, making the mud out of which the bricks are molded. The men were naked almost to the waist, and they kneaded the wet clay by tramping up and down on it.

The cotton-growing experiments going on in Uganda are typical of others now being tried in various parts of Africa. The cotton possibilities of the Sudan are enormous, and the cotton now being raised about Khartum is equal in quality to the best of that produced on the delta of the Nile. In Kenya Colony the authorities are raising some cotton on the Juba River, and successful plantations have been started in South Africa. Cotton is one of the chief exports of Tanganyika Territory. Experiments are being conducted also in Togoland, on the Gulf of Guinea, with fair prospects of success. The Italians are attempting to grow cotton in Eritrea, the little strip of territory that they own along the Red Sea, but so far their success has been small. The French have done little with cotton in Africa as yet, but the Belgians are making experiments in the Congo Valley, where they have plantations managed by Americans from Texas. They are using American seed, and the cotton grown is of excellent quality.

The British Cotton Growing Association is backing many of the experiments in the English colonies. That organization has a capital of one million dollars and its plantations are now producing several million dollars' worth of cotton a year. Some of its best work is being done in West Africa, and especially in Nigeria. The English manufacturers would like to see enough high-grade cotton grown under the British flag, at a reasonable price, to make them independent of the United States crop.

CHAPTER X

WHERE THE NILE BEGINS

STAND with me on the cliffs at Jinja, which lies east of Kampala and in the district of Usoga, and take a look at the source of the Nile. We are at the head of Napoleon Gulf on the northern end of Lake Victoria, and within a few miles of the Equator. In a straight line we are farther from the Mediterranean than Salt Lake City is distant from New York, and that swift current moving below us will wind its way for about four thousand miles before it washes the cities of Cairo and Alexandria. It will pass through Uganda Protectorate, will cross Lake Albert, and then, making its way through the swamps of the Sudd, will go on through the half desert Sudan to water the dry lands of Egypt.

Notice how fast the current is here where the great river starts. It was perceptible as we came in by boat from Kampala Port and the surveyors claim that it can be traced clear across Lake Victoria to the mouth of the Kagera River in Tanganyika Territory. It is now conceded that the Kagera is a source of the Nile, but it is really no more so than are the other rivers that flow into Lake Victoria. The mighty lake itself is the only real source. It gathers its waters from many rivers and the Nile forms its only outlet. Together with the river, the lake drains a basin one third to one half the size of the United States, and the waters from this vast territory will

all be gathered between the banks of the Nile before they reach the sea.

Looking down from the wooded hills where we stand, we can see the beginning of the rapids and hear the thunder of Ripon Falls, over which the flood pours a short distance away. We can walk there, and, after picking our way in and out through the woods along the cliffs, we finally stand at the edge of the falls. There are little islands in the channel, and the current rushes over in three separate rivers, reminding one a little of our own Niagara, where the waters are parted by Goat Island.

The water is comparatively quiet above, but after it passes the islands it plunges down in a boiling, bubbling, seething mass. The spray rises high into the air and falls back like rain on the tropical forest. It goes up in a mist on which the dazzling sun paints rainbows. There are many fish in the lake and they often swim down the falls. We can see them jump high out of the current, turning somersaults as they go over the rocks. The woods are full of birds; there are cormorants and hawks, and one may sometimes see a whale-headed stork.

Where the Nile flows over the falls the channel is only about twelve hundred feet wide. I understand that the rocky foundation is such that the lake can be easily dammed. The stream is deep and narrow, and for a distance of almost forty miles passes over a series of cataracts in which no boats can live. The waters rush onward with a terrible force until within about thirty miles of Lake Kioga. There the land is almost level and the lake is shallow and quiet. Through swamps and lagoons filled with crocodiles and hippopotami the Nile flows peacefully along. Later it takes two other great plunges on its way

Near Jinja, in Uganda, not far from the Equator, old Father Nile starts on his journey of nearly four thousand miles to irrigate the land of Egypt. The river has its beginning in the overflow from Lake Victoria.

Doubtless there will some day be modern saw mills in Uganda for cutting up the enormous supplies of valuable hardwoods available, but at present the methods in general use are crude and old-fashioned.

to Lake Albert. The first of these is Karuma Falls and the other is Murchison Falls, about two hundred miles north of Jinja. After that there is comparatively little current to Lake Albert.

I have learned here of many plans, both past and present, for developing the water-power of the Nile at its source. The British have made a survey of the upper river and an estimate of its value to the industrial development of the country. Exploiting the forests on both sides of the Nile are big lumber interests that want power, and I am told that other parties are seeking concessions. The government, so I understand, is averse to leasing power sites at the falls proper, as it may be necessary to build a dam here to regulate the outflow of the Nile. It does not object, however, to works along the rapids below the falls, and at one time there was talk of a series of power stations extending down stream for thirty or forty miles and serving all the manufacturing likely ever to be done in this part of Africa. As it is now, the government has reserved a strip of land a mile wide on each side of the Upper Nile, but concessions might possibly be had for the installation of turbines along the rapids, whence power could easily be conveyed across this strip by wire.

One of the interesting engineering problems of this part of the world is concerned with the question of whether the flow of the Nile can be regulated from Jinja. In another volume of these travels, "Cairo to Kisumu," I have described the Aswan dam, which has added millions to the wealth of Egypt. Some of the best of the world's civil engineers look upon Lake Victoria as the great reservoir of the Nile basin. A prominent engineer of the Egyptian public works has said that a regulator could be put in here

at Ripon Falls and the water let out through sluices as needed. As the Nile is the only outlet from Lake Victoria, a small dam at its source would impound enough water to irrigate a large part of the Sudan and add millions of acres of fertile land to Egypt.

As it is now, the lake is estimated to receive one hundred and thirty-eight thousand million tons of water every year, much of which is lost by evaporation. Only eighteen thousand million tons flow out into the Nile, so that Lake Victoria could double its discharge and not feel it. Indeed, if all the water carried down by the Nile during one year were poured into Lake Victoria, it would not raise the level of that lake one foot, and it would require more than three years' flow to raise it a yard. There are, however, many engineering as well as political difficulties connected with the projects for damming the Nile, and many of the water-power schemes have come to naught.

All along this part of the Nile are dense forests. The trees come right down to the river. Some of them are about one hundred and fifty feet high, with trunks that rise forty or fifty feet without a branch. There is a great deal of mahogany and other hard wood, and lumber mills may some day be established along the river to supply the demands of Kenya Colony and Uganda. Some of the timber is so valuable that it could bear the cost of being cut and sawed here, and then shipped by water to Kisumu and thence over the Uganda Railway to Mombasa to be carried by steamers to Europe and South Africa.

The most accessible of the Uganda forests is the Mabra, which lies near Lake Victoria close to the road from Kampala to Jinja. It furnishes good building timber and some rubber. In recent years much attention has been given to

rubber growing in tropical Africa. In Uganda Protectorate recently there were found to be more than twenty-five hundred acres of rubber under native or European cultivation. It is frequently grown in conjunction with coffee.

A big rubber syndicate has a concession of one hundred and fifty square miles of forests in this region, and a number of plantations are now in production. The chief trouble here in prosecuting any large rubber-growing or other enterprise is the lack of good labour. The natives will work for a few days or weeks and then lay off until they have eaten up what they have earned. One company needing three thousand men offered the enormous sum of two dollars a month, for new hands, which brought labourers in from other parts of the Protectorate.

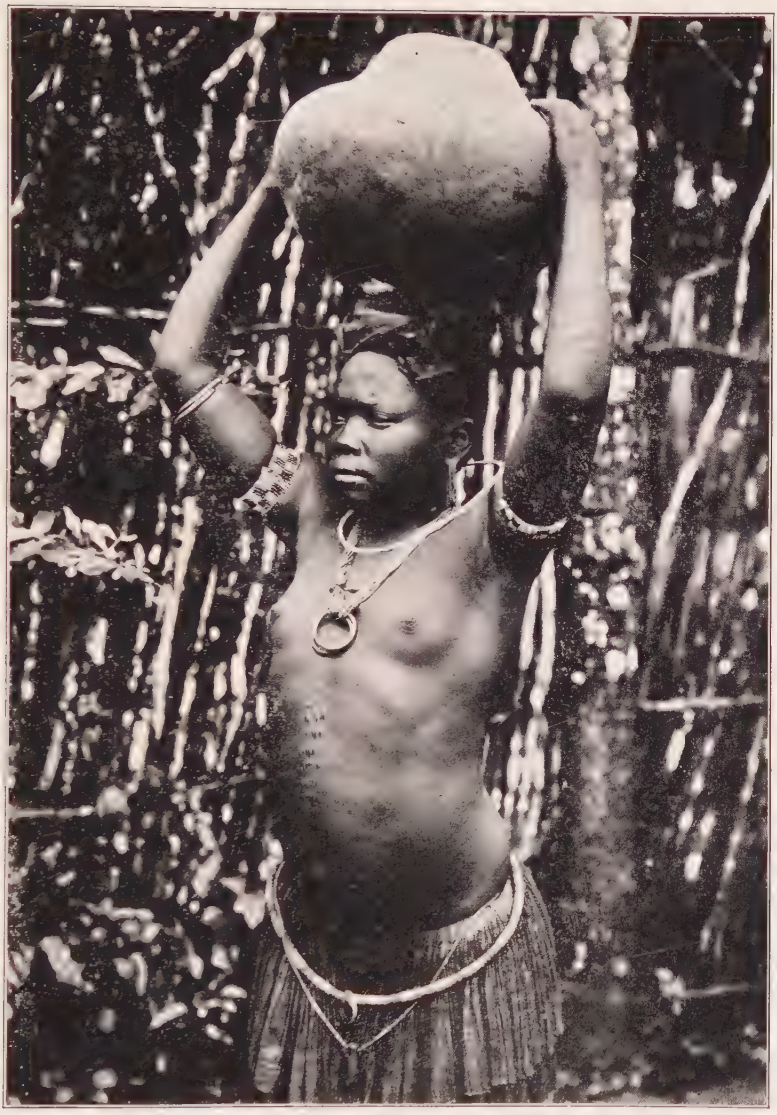
The natives of the district that includes the source of the Nile are known as the Basoga. They are not so civilized as the Baganda, but in many respects look and dress not unlike them. They wear sheets of American cotton or bark cloth blankets, the material for the latter being raised in their gardens. The men tie the blankets over their shoulders, and the women wrap them around the body under the arms, leaving their necks and shoulders bare. They sometimes have sashes of bark about their waists, and when working a girl often allows her blanket to fall down to her sash, leaving the upper part of her body nude. At such times it is possible to see the skin decorations which the women here affect. They gash themselves below the bosom, making four long scars that stand up like ridges. Some of the women wear strings of beads and shells about their waists, while not a few have bracelets and anklets.

The chief occupation here is agriculture, although some of the people have cattle, sheep, and goats. In the markets I see peanuts, Indian corn, beans, bananas, and sweet potatoes. As in Buganda, bananas constitute the principal article of food.

At present the country about Jinja is considered very unhealthful and the population of the town consists mostly of a few hundred black natives living in thatched huts scattered along the wide streets laid out by the English. There are some Hindu traders and a native market. The government offices and stores are enclosed in a large rectangular stockade.

The day will doubtless come when there will be a city at Jinja, and when railroads and steamboats will make this point the commercial and manufacturing centre of the African highlands. The town is already the capital of the district of Usoga and the southern terminus of the Busoga Railway, which connects Lake Victoria with Lake Kioga. About Lake Kioga are extensive cotton lands, and the whole country has a rich soil. The lake is thirty-five hundred feet above the sea. It consists mostly of swamps, but it has been so dredged that it is navigable and the River Nile can be used by boats as far as Atura, one hundred and sixty miles from Namasagali, the Busoga Railway terminus.

In fact, it is comparatively easy now to go from the source of the Nile to Khartum and down to the Mediterranean by river and rail. The distance between here and Nimule is covered by train, motor-car, and steamer. From Nimule one must "trek" or cycle for eight or ten days beside the rapids of the Nile to Rejaf, more than a thousand miles from Khartum. At Rejaf there are steamers



To bring good luck, married women make cuts in the flesh of their abdomens and rub plant juices in the wounds to raise big welts. As an extra safeguard, husbands add a few scars before going on a journey.

The huts of the natives of western Tanganyika are often built inside an enclosure surrounded by a high brush fence, as a protection from leopards. Outside the enclosure are raised corn, sugar cane, and bananas.

In contrast with the Baganda people north of Lake Victoria, who wrap themselves in bark cloth, the unmarried women of certain tribes south of the lake are almost nude, although the men and married women may wear capes or skirts.

which go to Khartum, and from there the route to Cairo is so well known as to need no further description.

But I must hurry to the docks if I am to catch the northern route steamer from Kisumu. From Jinja I shall go, via Entebbe, to Tanganyika Territory, that vast new country added by the World War to Great Britain's colonial responsibilities.

CHAPTER XI

IN TANGANYIKA TERRITORY

LEAVING Entebbe by steamer, we coasted for a few hours in and out of the islands bordering Uganda, and are now at anchor here in the beautiful harbour of Bukoba. Bukoba belongs to Belgium, but it was formerly a port of German East Africa, or, as it is now called, Tanganyika Territory. As our travels for some time will be in that country, let me give you some idea of it before we go ashore.

Tanganyika Territory is one of the former German possessions in Africa now in the hands of the British and the Belgians. The World War made great changes in the political map of Africa, and especially in the territories about the Great Lakes. In 1914 Germany claimed jurisdiction over areas on the east and west coasts of Africa three times as large as the main body of the United States. The Kaiser then considered his holdings but the beginning of his African possessions, and, had his plans succeeded, would have added to them the Belgian Congo, Angola, Mozambique, and other lands constituting the central part of the continent from the Atlantic coast to the Indian Ocean. Maps made in Germany showed both his actual and prospective holdings under the title of "Mittel Afrika."

A missionary who has been in Uganda for years told me how near the Germans came to getting possession of the rich territory of Uganda, and thereby gaining control of

the whole of Lake Victoria. Whether this was attempted by Prince Bismarck and the German government, I do not know, but the movement was engineered by Dr. Karl Peters, one of the first German settlers in German East Africa. The incident occurred about 1890, when relations between King Mwanga and the British government were exceedingly strained. Mwanga had said that if the British would furnish troops to support him in his troubles with his Baganda subjects he was ready to make a treaty placing his country under their protection. This missionary wrote a letter to that effect, addressing it to the commissioner of British East Africa. The messenger was captured on the way, and the letter fell into the hands of Doctor Peters, who was then travelling through the country as a sort of soldier of fortune and diplomat combined. As the story goes, Doctor Peters tore up the letter, by forced marches reached Uganda before its loss became known, and was able to make treaties with King Mwanga whereby Uganda should come under the protection of the Germans.

In the meantime, however, the officials of Germany and England had held a conference over African matters, during which they made an agreement as to the boundary between the German and the English possessions. By this agreement all the country lying south of a line about midway through Lake Victoria, with the exception of Zanzibar, was given to the Kaiser, and all north of that line to Queen Victoria. At the same time the British ceded to Germany the island of Heligoland. The Germans had not yet received news of what Peters had done in Uganda, and when word from him reached Berlin the new treaty with England made his work of no avail.

Heligoland was a little island in the North Sea, covering less than one hundred and thirty acres and populated only by fishermen to the number of something like two thousand. Moreover, that island was fast being eaten up by the sea, growing less in area every year. On the other hand, Uganda was setting out cotton plantations, roads had been built through it, the land was rich, and it also controlled the source of the Nile. The British had no doubt that they had received the best of that bargain, and it was not until the World War that the whole world realized that in securing Heligoland Germany was enabled to place the dagger of her navy at the throat of British sea communications.

The former Emperor of Germany once had among his possessions the scalp lock of this African continent. It was a bit of rock as big as your fist, and it was taken from the very tip of Mount Kilimanjaro, which, dominating all Africa, pierces the sky at a height almost four miles above the sea. The rock was cut off by a German who climbed to the top of the mighty mountain. It was ground smooth and made into a paper weight, and it used to lie on the Kaiser's library table in his palace at Berlin.

The colony of German East Africa extended four hundred and fifty miles along the east coast, between what are now Kenya Colony and Mozambique. It included about one half of Lake Victoria, while the boundary line between it and the Belgian Congo ran through the middle of Lake Tanganyika. During the war the colony was captured by the British and South African forces, the German forces surrendering near Abercorn in northeast Rhodesia in 1918. By the Versailles Treaty the territory was divided between the British and the Belgians, the

latter being given the provinces of Ruanda and Urundi at the northwestern corner, while all of Lake Victoria and the remainder of the country went to the British, who now hold it under a mandate from the League of Nations. In 1921, parts of the Belgian territory were also added to the British holdings.

The British have changed the name of their portion of German East Africa to Tanganyika Territory. It forms an important addition to their African possessions, containing more than three hundred and fifty thousand square miles, and a population of between four and five million people. Like Kenya Colony, much of it is high and healthful, and it has great possibilities in the production of rubber, sugar, cotton, and coffee. Coal, iron, gold, lead, and copper are known to exist, and sisal hemp is successfully grown.

From the former German capital, Dar-es-Salaam, on the Indian Ocean, the British are ruling the country through a governor and an executive council. They are developing it under policies similar to those established in Kenya and Uganda, and are especially encouraging white settlers. This is contrary to the German policy, which was to exploit the country only as a source of raw materials for the homeland. The Kaiser granted vast tracts to syndicates, companies, and individuals with large capital for the development of extensive sisal, coffee, rubber, cotton, and cacao plantations. These were supplied with native labour under a government system that compelled the natives to work for the planters for a trifling wage during a part of every year. Up to the time of the war the prospects of these enterprises seemed exceedingly bright. The Germans had built a railway across the

colony from Dar-es-Salaam to Lake Tanganyika, a distance of seven hundred and eighty miles, and another line reaching from Tanga to the slopes of Mount Kilimanjaro, two hundred and twenty miles inland. The latter road now connects with the Uganda Railway in Kenya Colony.

During the war the British and Belgian railways were extended from South Africa and the Congo so that it was possible to get to Lake Tanganyika by steam. Naval battles were fought on both Tanganyika and Victoria. The British ships for Lake Tanganyika were brought in pieces by rail from Cape Town to Katanga over the Cape-to-Cairo railroad, and thence were pulled by traction engines over rough country for one hundred and fifty miles to the line terminating at the Lualaba River. They were floated down this river four hundred miles through shoals and rapids to the rail-head for Albertville, the Belgian port halfway up the lake. There they were put together and in a short time succeeded in destroying all the German craft on the lake.

Lake Tanganyika, from which the territory takes its present name, is long and narrow and deep. From shore to shore it is only from twenty to forty miles wide, but it is four hundred and fifty miles long. Except for Lake Baikal in Siberia, it is the world's deepest fresh-water body, soundings of more than four thousand feet having been made in some places. Steamers ply up and down, traversing the lake lengthwise in about four days.

Bukoba, where I am now, is beautifully situated, lying on a moon-shaped bay backed by low hills. At the south are grass-grown bluffs ending in palisades of granite, rising straight up from the water to a height of two hundred feet. Under these bluffs is the landing place, but it was

a little outside that our steamer came to anchor. We were carried to shore in native canoes of wonderful workmanship. Each boat was about thirty feet long, three feet wide, and two feet deep. It had a keel made of the trunk of a tree, and the sides were of hewn boards about a quarter of an inch thick and a foot wide, running almost the full length of the boat. These boards were sewn together and fastened to the keel by threads of fibre or bark. I saw also larger boats, some even fifty feet long, which were made in the same way.

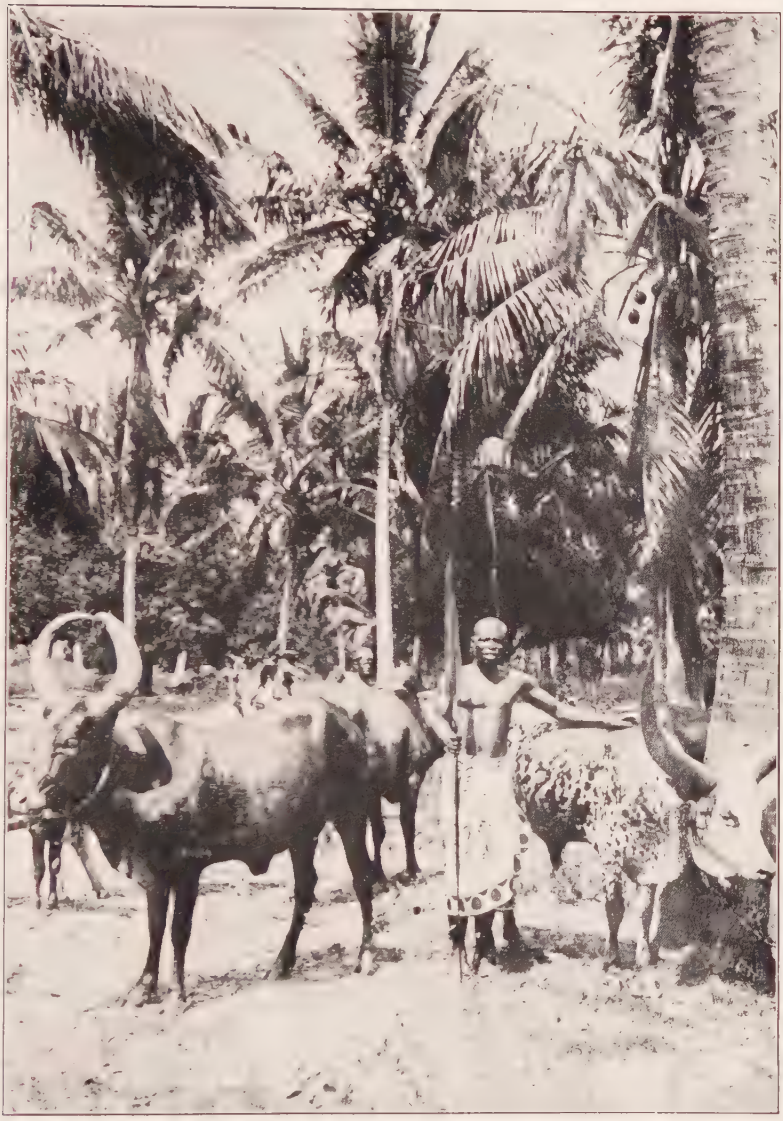
We stepped out on the shore under the bluffs and walked perhaps three quarters of a mile through the banana groves about the bay to the opposite end of the harbour. The stores and market lie near the fort, but the town of Bukoba is some distance away. The chief business street consists of a dozen or more little booths, each occupied by a Hindu merchant. The black, grass-clad customers stand outside and make their purchases. The chief goods sold are coloured and bleached cottons. Another popular article of merchandise is the copper or steel wire so much in demand in East Africa as jewellery. The wire is brought here in great kegs, and coils of it are hung up in front of the stores. It is of all sizes, from the thickness of a needle to the diameter of one's little finger. The heavier wire is hammered out into armlets, anklets, and collars, while the finer strands are woven and plaited into similar ornaments.

In the market square near these stores I saw many black peddlers squatting on the ground with their wares piled about them. Here a woman sold sweet potatoes, there one offered little piles of the entrails of sheep or goats, and farther over were others selling peanuts and roasted white

ants. These articles of food were displayed upon bits of banana leaves and were sold for so many cowry shells per pile.

The native currency of this part of Africa is the cowry shell, and I understand it is still in use throughout the regions about Lake Tanganyika and in the Congo Valley. The shells are brought here from the coast of India and are exchanged for British currency. Among my recent purchases are two spears for fifteen hundred shells each, a carved milk bowl for two thousand shells, and a native chopping knife that cost one thousand shells. These shells are very small, but when used by the thousands they are clumsy to handle. The cowry has, however, become much less common than it used to be. The Germans introduced a coin known as the heller, based on the silver rupee, while the British government has established a rupee worth two shillings.

It was just outside the market that I made an extraordinary bargain in ladies' clothing. For five hundred cowry shells I was able to purchase the whole wardrobe of a girl of eighteen. The sale was made in the midst of a crowd, and the wardrobe consisted of a dress, the only garment the young lady was wearing. I took the girl outside the crowd and had a photograph made of her before she delivered the goods. She was about four feet tall and as straight as an arrow. The dress I refer to began at the waist and fell far short of her ankles. All she wore above it were two strings of beads around her neck, the body from there to the waist being bare. The dress was made of the long fibres of the raffia palm, and it looked for all the world like so much timothy hay tied on by a string. There were so many strands of the fibre that they



Among some tribes cattle are the chief form of wealth and are used in place of money, especially in bargaining for wives. In Tanganyika Territory the cured hides compete with cotton print goods as clothing material.

Although her skirt of raffia palm fibre constituted her entire wardrobe, this young Baziba belle cheerfully sold it to Mr. Carpenter for five hundred cowry shells, the equivalent of a few cents in our money.

hid all of her person from the waist to the knees, and the strips swayed this way and that as she walked.

I was accompanied by one of the best known missionaries in this region, and it was through him, as an interpreter, that the trade was made. When I pointed to her dress and held up the double handful of cowries her eyes brightened, and when the missionary told her that I was willing to pay that much for her gown she gladly assented. She borrowed a piece of red calico about the size of a towel, which one of her sisters was wearing as a shawl, and, loosening the fibre skirt a little at the waist, slipped on the cloth and wrapped it around her person. It was long enough to fall to the middle of her thighs, and she fastened it over the left hip with a thorn. She then took off her skirt of long fringe and handed it to me. The missionary, after talking with the girl, told me that she was trembling with excitement and delight at her bargain, and ventured she had never made as much as four cents in one day in her life. Here she was selling her old skirt for five hundred shells, equal to the wages of six or eight days of hard work. When I gave her the shells she thanked me again and again for my great generosity and then trotted off laughing. In the whole transaction she displayed not the slightest immodesty, and at the close, although almost nude, was not embarrassed.

The Bazibas, as these people are called, are mostly clad in grass clothing. The men have grass or fibre cloaks around their shoulders. Some have skirts of grass fastened to a ring at the top that goes around the neck, and the unmarried girls have little fringes of grass or raffia fibre, not more than eight inches long, that they wear around their waists. Besides this, a girl may have a

bracelet or two and some anklets of wire, but otherwise she is bare.

But, after all, modesty is a matter of custom. Recall, for instance, the unblushing nude Kavirondo and the prudish, well-covered, yet much less virtuous Baganda whom I have already described. Indeed, of all the inhabitants around Lake Victoria, the Bazibas are about the most rigid in regard to matters of sexual morality, and offenses against the marriage tie are punished severely. The Bazi-ba man and woman who attempt to live together without being married take their lives in their hands. They are liable to be tied hand and foot and thrown into the lake; and if they dwell far off in the country they may be carried to the nearest swamp and buried alive under the flags. Marriages are arranged under about the same conditions as in other parts of Africa, the girls being sold by their parents.

Among the Nandi tribes, where the richest men have from ten to forty wives, the price for a good maiden of fourteen is six cows. Girls are frequently betrothed when only seven years old, and married at eleven. The cows are often delivered one at a time, and if no child is born within a year after the marriage the husband may stop payment. It is among these Nandi, as with the Masai, that the unmarried girls dwell with the unmarried men in the bachelor quarters until they are old enough to get married. A Masai man is not supposed to marry until he is thirty. Among the Buvumas the price of a wife is two cows and five goats. The father of the bride keeps one of the cows and a goat, the other animals being given to the relatives.

Leaving the market, I visited the village near the fort, and then went across country to see other towns in the in-

terior. The houses are much like those of the Baganda. At a distance they look like haystacks or straw tents. They are made of poles held together at the top to form a framework the shape of a cone. This is lined with reeds running from the bottom to the top and fastened by bands of reeds that go round and round inside the hut from floor to roof. The outside is thatched all the way down to the ground. The roof is upheld by many poles so arranged that they divide the interior into rooms. One of the huts I entered had two sleeping apartments about three feet wide and six feet long. In the centre of the hut was a fire, upon which some food was steaming away in an earthen pot. As there was neither stove nor chimney, the smoke filled the place. It had long since turned the walls and roof a deep brown colour, so that the whole looked gloomy. I understand that the fire is kept up day and night, because the weather is often damp, and also because new fires are hard to kindle. In many parts of this country matches are comparatively unknown, and a fire is lighted by twisting a stick in a hole made in a block of wood until the friction brings a spark.

The floor of this hut was well pounded down and the wall inside was plastered with clay to the height of my waist. There was no grass or hay on the floor, as is common in Uganda, while the entrance, which was very low, was by no means so well constructed as those of the huts along the northern shores of the lake.

I visited also a large native town made up of the homes of the chiefs and their retainers. It consisted of enclosures surrounded by high fences of upright poles tightly bound together by vines. Inside each fence was the establishment of an African nabob and his numerous wives.

In going through the village I wound my way about enclosure after enclosure, through one walled alley into another, and in and out among buildings of poles and mud until my sense of direction was lost.

As one of the chiefs was putting up a new establishment, I had a chance to see how the buildings were constructed. They were made of poles, mud, and elephant grass. One man may have a large number, including separate apartments for each of his wives. There were not many women about, but such as I saw were clad in grass skirts reaching from their waists to their feet and a few had on grass capes. The men were mostly young, straight, well-developed, and fine looking, but nearly every one of them was more or less drunk. A feast was going on, and each man had a long calabash filled with banana beer at which he was sucking through two straws.

In front of one of the huts a dozen men were dancing to music made upon several great drums. Anxious to own one of these drums, I tried to purchase one from a chief. The instrument I picked out reached above my waist as it stood upon the ground. It was as big around at the top as a flour barrel, narrowing to the size of a nail keg at the bottom. Like those I had seen at Kampala, it had been hollowed out of a log, and the top and bottom were covered with goatskin laced on with gut. It had evidently been used for many years, and its sound was most resonant. I offered the chief ten thousand shells for it, but he politely refused, saying that he and his ancestors had had that drum a long time, and that he did not know where he could get another as good. He told me that if he owned another he would gladly give me this, but that, alas, he had only the one!

Our New England shoe manufacturers get some of their leather from hides that are brought to Mwanza by the natives for shipment across Lake Victoria, whence they go over the Uganda Railway to the coast.

The memorial to Bismarck that stands on the shores of Lake Victoria at Mwanga is but one of many such monuments erected throughout the colony by the Germans when they ruled this part of East Africa.

CHAPTER XII

AN OUTPOST OF WORLD TRADE

THE distance from Bukoba to Mwanza, at the extreme southern end of Lake Victoria, is ninety-three miles. Our little steamer was the greater part of the day coasting the rocky shores between the two places. The lower part of the lake is cut up by great bays. At my left, as we approached Mwanza, was Speke Gulf, which extends fifty miles inland, and at my right was Emin Pasha Bay, which was discovered by Stanley and Emin after they thought they had outlined this part of the lake. Lying between these two bays is the estuary upon which is situated this town of Mwanza, the chief port of Tanganyika Territory on the lake. It is the place where John Hanning Speke first saw Lake Victoria and whence he announced its existence to the world.

Mwanza was built by the Germans, who erected a monument to Prince Bismarck out here on the southern shores of Lake Victoria. The memorial stood right on the lake with its back to the water and its face toward the town. It consisted of a bronze medallion as big around as the top of a flour barrel, bearing the bust of the great chancellor. This medallion was cemented to a pyramid or obelisk, rising in a beautiful grove. Just back of it was a great rock one hundred feet high, surrounded by trees and banana plants. Other monuments to Bismarck were erected in some of the German towns along the coast of

the Indian Ocean, and a fine statue of him was put up at Dar-es-Salaam.

Mwanza lies on a harbour shaped like a bow, and is well guarded by small, rocky islands. The entrance is so narrow that we seem to be in a separate lake shut off from Victoria. Our steamer lies at the wooden pier built out into the harbour. At the end of the pier is the custom house, a shed walled and roofed with galvanized iron, and back of it are the round white towers of the fort, in front of which tall black soldiers in khaki march up and down.

At the right of the custom house are the low bungalows, with white walls and red roofs, in which are a hospital and the offices of the civil governor, while at the left, high up on a hill, is the home of the military commandant, by far the best house in the place. It was built by the Germans but is now occupied by the British. Between that and the shore extends a forest of oil palms, and farther back, behind the fort, running for several miles out into the country, is the native village of Mwanza, with its Hindu stores and thatched huts. The village is cut up by wide streets. There are many trees, and everything looks spick and span and new.

Before I take you on shore, let us look at the scenes about the wharf, and watch the blacks unloading and reloading the steamer. This will give some idea of what is going on out here in the heart of East Africa. Not so many years ago this country was absolutely unknown. It was supposed to be an impenetrable wilderness; its people were in continual warfare, and the chief business was the buying and selling of slaves. To-day commerce has brought it into touch with the rest of the world and it

now does business with the United States. We buy many of its products, while the richer of its natives are wearing our cottons. See that great bale of cloth being taken off! That contains Americana, which brings a better price than similar goods from England, Germany, or India, with which it competes.

Those hides coming down to the ship on the heads of that gang of natives are destined to be made into boots and shoes in our American factories. We formerly got some of our best goatskins from the Somali coast, via Aden, Arabia. Then one of the Uganda officials, who had been on duty in British Somaliland, decided that the goatskins from the Protectorate might be sent to America, and so a big trade in that product grew up north of the lake. It was extended down here to the south, and some of our finest skins now come from this part of Tanganyika. Cattle hides, as well as the skins of goats and sheep, are exported in large quantities.

The regions about the southern end of the lake are devoted largely to stock raising. The natives have big herds of cattle, sheep, and goats, and the chief profit comes from the sale of the skins. Cows are now selling here for eight or ten dollars apiece, and a sheepskin or goatskin can be bought for a few yards of American sheeting. Back in the interior the people wear the skins of cows and goats, with the hair on, and even here in Mwanza there are both women and men dressed in that way.

This country is also a land of corn, cotton, and peanuts. There are cotton plantations near here that now ship their product to England. The cotton is put up in one-hundred-pound bales and brought to this port by gangs of carriers, two men to each bale. From here it is shipped

up the lake and down to the seacoast via the Uganda Railway. As to peanuts, one hundred and fifty-four million pounds were shipped from Tanganyika Territory to Europe last year, and something like six million pounds went out from Mwanza.

I have spoken of Mwanza as a future trading centre. Situated on a lake that is eight thousand square miles bigger than Lake Michigan, and surrounded by a rich country, it may become the Chicago of this part of the world. It is now proposed to build a railroad between Mwanza and Tabora, which is on the railway from Dar-es-Salaam to Kigoma on Lake Tanganyika. This will give Tabora a similar position to that which Indianapolis now holds in relation to Chicago. An excellent highway, built by the Germans, already extends from Mwanza to Tabora.

At present much of the freight from here is carried on British steamers across the lake to Kisumu and down over the Uganda Railway to Mombasa. Since the completion of the Central African Railway to Dar-es-Salaam, a good deal of the freight of this region has been diverted to that road.

During my trip around Lake Victoria I have had a good opportunity to learn about trade matters. There are many millions of natives who might be reached from this lake, and Uncle Sam should send out his salesmen to show the traders our goods and study their wants. I have already written of American sheeting, of which we are landing a dozen bales here at Mwanza. They were sent in through a Zanzibar company that has its men going through this part of Africa selling goods and buying hides and ivory. The natives know the genuine Americana

Many of the natives file their teeth until they look like the edge of a saw. Others knock out certain teeth to bring them good luck and ward off evil spirits.

To maintain his prestige among his followers, the witch doctor must wear a costume befitting his rank, and must stage dances and weird ceremonies to cast out evil spirits from afflicted members of his tribe.

by its smell, and, upon putting their noses to the Manchester or Bombay goods, will often throw them aside in disgust. Indeed, over much of the interior of the Black Continent our cottons have become a standard of value, and are sometimes used as money. A sheep, for instance, is estimated as worth a yard and a half of Americana, a cow is worth nine yards, and a buxom young girl of thirteen or fourteen is valued at sixty yards or more.

But let us take a look at the markets of Mwanza. It is there that we can see how these people do business. The markets are in and about a building covering a quarter of an acre. It is open at the sides and its thatched roof is upheld by round white wooden pillars. Upon the floors are scores of black women and men, some dressed in cottons, others in bark cloth, and not a few in cowskins. They are sitting on the ground with their wares lying before them in almost infinitesimal piles. The people are so poor that no one can spend more than a few cents at a time, and many of the purchases are in fractions of a cent. Here, for instance, is a peanut peddler. She is a black girl with plugs in her ears. The red shelled nuts are spread out on a mat in piles of ten each, a pile selling for twelve cowry shells or one tenth of a cent. Farther over is a woman selling tobacco at one half cent per twist. Each twist is the size of my little finger, and those packages of snuff wrapped up in leaves are not quite as large. Soap and roasted ants are sold in much the same way, and so also are some kinds of imported goods. Going on, we see a man selling needles and thread. No one here thinks of buying a whole paper of needles or a whole spool of thread at one time. The needles are divided into lots of two, three, or five and stuck into green cane; the thread is

cut into short lengths and wrapped around bits of dried banana leaves.

In one corner of the market are the butcher shops. All meat is quite cheap, but there is no cutting of the carcasses into steaks, chops, and roasts, as at home. Each butcher has the carcass and entrails of a steer lying before him. They are usually spread out on the bloody skin of the animal, which has been killed on the spot where it is to be sold. The butcher chops and saws off little chunks of meat according to the order, and he cuts up the entrails as his customers want them. The demand for the latter is as great as that for the meat itself.

Under a tree in the market court men and women are selling fish, fresh and dried. The latter, about the size of a sardine, are arranged in little piles of five, and they bring one cent a pile. Near by, flour is sold. It is made of millet and is brought to the market in closely woven baskets. Other merchants are selling the millet unground.

One of the most popular places is the beer hall. It is in the large market house and is crowded with customers. The barkeepers are women who sit flat on the floor beside great round stone jars that are apparently filled with soapsuds, but really with banana beer, which has a foam somewhat like live lager. The beer is ladled out into gourds, and the customers take it away, sucking at it through straws as they go. The liquor is strong, and we frequently meet drunken men and women.

CHAPTER XIII

WITCH DOCTORS AND DEMONS

THE natives living in and about the southern part of Lake Victoria are known as the Wassakumas. They are ugly blacks and look savage enough, especially those seen out in the country, where the majority dress in cowskins with the hair on. The women wear skirts of such skins, while the men fasten them over their shoulders so that they conceal little more than the upper parts of the body. Here in Mwanza most of the men have only a cloth about the waist, leaving the upper part of the body bare. Babies are carried on the bare backs of their mothers, being fastened there by goatskin slings. Sometimes they are tied on with cords.

The Wassakumas are tall and well formed, with black or very dark brown skins, and they have thick lips and flat noses. Their hair is woolly or kinky, and they have original ways of dressing it. Some of the women shave sections of the scalp, and a man will often have a place as big around as the bottom of a tin cup scraped off at the crown. Sometimes this bare spot is covered with scars, made by cutting and gashing it to cure headaches. Others of the men are shaved perfectly bald. They grease their heads until the scalp shines like patent leather.

Many of the women divide the hair into little braids, and evidently shave the partings between them. Others twist the wool into curls that stand out like little black

angleworms all over the head. Imagine a thick-lipped brunette Medusa adorned with fish bait instead of snakes, and you have the typical Wassakuma beauty. Some of the more giddy of the belles tie shells and beads at the ends of these curls, so that they jingle as they run. I have looked in vain for eyelashes and eyebrows. The Wassakumas pull them out with tweezers. The men pull out their beards by the roots in the same way.

I find that many of the natives about Lake Victoria beautify themselves by filing their teeth. We have men from different parts of the lake shore loading and unloading the steamer, and at my request the captain brought them up on deck so that I could examine their jaws. He took each native and held his mouth open while I looked over his teeth. Some men had them filed sharp so that they looked just like the teeth of a saw; others had certain teeth missing, and I was told that they had been knocked out in the belief that their absence would bring good luck or ward off evil spirits. Similar practices prevail among the Kavirondo, who believe that if a man retains all his lower teeth he will be killed in battle, and that if his wife does not pull out the two middle front ones of the lower jaw he will surely die. For the same reason the woman makes scars on her forehead and also gashes out a pattern in the flesh of her abdomen. The Masai knock out the two lower front teeth, and on the upper side of Uganda, along the Nile, there are tribes that pull out two or more of the lower incisors. This is the case with the Banyoro, who live west of Uganda. They extract the four lower front teeth, allowing the upper ones to grow long and become shovel teeth.

I find the condition of the Wassakumas not so good as

that of the people of Uganda. They wear less clothing, and their houses are poorer. The huts of the Wassakumas have walls of sticks set upright in the earth, and laced with vines running in and out through them. After this the walls are chinked with mud, and a cone-shaped roof is put on. The entrances are so low that one has to stoop to get inside. It requires some engineering to go in and out, as the door may swing either way. Sometimes it is hung at the top and sometimes at the bottom, or it may be lifted in and out at will. The huts are seldom more than ten or fifteen feet in diameter, yet each is divided into rooms for sleeping and cooking. The cooking is done in the centre of the hut on a fire built over stones that rest on the ground. The cooking utensils are usually clay pots, and the chief food is a porridge made of stewed millet.

The people have corn and peanuts in addition to millet, and they grind all three by pounding them in a mortar and rubbing them between stones. In one enclosure I saw a girl of fifteen pounding peanuts in a mortar with a wooden pestle, and in another a woman was kneeling down and grinding millet by rubbing the grains between stones. The stones looked as though they might have been picked up from the wayside. The lower one rested on the edge of a basket, into which the flour fell as it was ground.

I saw but few furnishings in any of the houses. The people sleep on the ground and squat about on the floor at their meals. They have no tables and no chairs. A few houses contain stools eight or ten inches high, while in one or two I saw low frameworks of poles covered with skins that were evidently used as beds. The Wassaku-

mas are skilled in making baskets of all kinds and sizes, including enormous grain baskets of fine straw. The latter are used in nearly every hut for storing millet and corn. I saw one that measured five feet in height and at least eight feet in diameter. It would, I venture, hold a good-sized cow and leave room to spare.

When a young man of the Wassakuma tribe wants a wife he pays her father sixty sheep for her or agrees to work for the old man for a number of years. All marriage arrangements are made by go-betweens, a matchmaker bringing the bride to the groom. In the meantime the chief bridesmaid has arranged the groom's hut for the occasion and made a new bed consisting of a framework of wood with a mattress of oxskins. The bridesmaid is paid a sheep for this work. Afterward she goes with the matchmaker, who might be called another bridesmaid, and brings the bride home in great style.

It was such a procession that I stopped one morning on its way to the groom. It consisted of a score or more of women dressed in garments of cowskins and cottons, yelling and singing as they danced about a queer-looking figure that laboriously moved along in the centre of the group. At first I could not make out what it was. It looked like a woman with a gigantic hump, wrapped around with bright figured Indian cotton. As the party came closer, this figure turned sidewise. The hump then took the shape of a human form, and I could see that the woman was evidently carrying a sister or brother under her calico gown. Handing my camera to my son Jack, who was with me, I accosted the lady. She laughed as I attempted to discover what kind of creature she carried. I could see two black feet sticking out at the front, and

by the outline of the stretched cotton could make out that it covered the bride, whose hands were clasped around the neck of the woman who carried her. The second bridesmaid stood behind the bride-carrier and held an umbrella over her.

As the party neared the hut of the groom, a score of his women relatives rushed out and scattered rice over the bride and her attendants. Peeping into the hut just before they arrived, I got a look at the bridal chamber, which was a dark closet shut in by bark cloth. I was told that the groom was not present but that he would come in and take possession after the bridesmaids had arranged everything and fitted out the hut for the pair.

The sixty sheep paid by the groom to the bride's father seemed to me a big price for a wife, and I asked whether many girls were not sold at reduced rates. The reply was in the affirmative, but I was told also that a big, strapping woman was worth something as a worker and that, as is usual among the African natives, the women were the slaves of the family.

In one of the yards I entered this morning I found a group of men on their knees about a woman who was seated on a low stool. The woman was ebony black, but her eyes were ringed with white paint, and her cheeks streaked with it. She had white feathers in her hair and other adornments that made her look hideous. She was a witch doctor, brought in to cure a man of colic.

Going on, I saw many evidences of other superstitions. In one yard were a lot of straw pens, which I thought might be made to hold little chickens, until my guide, Sassafras, told me they were put up to ward off the devil. Sassafras firmly believes in witches. He says all trouble

comes from them, and that if one kills a chicken and takes out its entrails, the way they are found to lie in the chicken will tell him whether the man or woman he suspects of bewitching him is guilty or not. I understand that such oracles are often the test of witchcraft, and that if a man unexpectedly dies his friends suppose he has been hoodooed. Nearly all deaths are thought to be caused by witches, and the witch doctors are always called in at such times to find who has made the special charm that has caused the calamity. Sickness is thought to be the work of an enemy or perhaps of an ancestral spirit. If it is an enemy, the medicine man or woman gives the victim a charm or tells him to wear a leopard skin or something of that kind. If this fails, an attempt is made to smell out the witch, and the person named by the witch doctor is liable to be beaten to death.

Our weather bureau officials ought to come out to Lake Victoria and learn something of the science of meteorology. The lands south of the lake are so frequently troubled with droughts that not only witches but rain-makers flourish. Some of the chiefs and sultans, supposed to be able to make rain, are liable to lose their jobs at the first long dry spell. Parents are sacrificed, too, in order to bring rain. There are certain unfailing signs that indicate that a drought is coming, one of which is the birth of twins. This is the greatest ill luck any community in the dry section can have, and the woman who brings it upon a village is sometimes banished. Certain kinds of babies are called bad-luck children, the natives believing that when they are born trouble is sure to follow. A baby with sore eyes, or one that gets its upper teeth first, is believed to portend dry weather. Indeed, this belief is so strong

The Wassakuma bride rides to her wedding on the back of a bridesmaid, and concealed from public view under a great cloth enfolding them both. The groom has bought her from her father for sixty sheep.

Although the witch doctor is considered all-powerful in dealing with any ailment of the natives, a slight pain in his own anatomy is sufficient to send him hurrying to one of the British physicians.

that sometimes children have been killed because of their supposed responsibility for a drought and the suffering it entails.

The fear of evil spirits is common in all countries lying south of Lake Victoria, and it was largely so in Uganda, north of the lake, until that country was converted to Christianity. Many of the Baganda people, even, still believe more or less in a legion of spirits. The natives have thirty-five different devils, one of whom presides over war, another over earthquakes, and another over the plague. There is supposed to be a devil in every leopard. It was to appease the spirits that, when the old kings built their palaces, hundreds of men were slaughtered. Sacrifices were made to Kitinda, the man-eating demon, and also to the snake demon and others. The natives had their god of plenty, their gods of the rain and the rainbow, and their demons of thunder and the falling stars. In short, the whole world of Africa is supposed to be infested by spirits, and devils of all kinds are everywhere present.

CHAPTER XIV

DAR-ES-SALAAM AND THE SWAHILI

DAR-ES-SALAAM is by far the most beautiful of all the ports I have visited on the east coast of Africa. It is as bright as a new pin and has every sign of trade and prosperity. Great warehouses line the wharves, and on the edge of the shore is a huge dry-dock that can accommodate any ship of this part of the world. There are always craft of many kinds in the bay and the large steamers of the Union Castle Line often call here on their way down the coast.

The distance from Mwanza to Dar-es-Salaam is about equal to that between New York and Cincinnati. The first stage of the journey is by motor-car over a good road through the wilds to Tabora, two hundred miles southward, and thence by the Central African Railway five hundred and thirty miles to the coast. Tabora is the most interesting place on the trip. Founded by the Arabs more than one hundred years ago, it was long the chief trading centre on the caravan route between Lake Tanganyika and the Indian Ocean. In one year a half million caravan porters passed through it bearing elephants' tusks on their heads. The cost of transport from the lake to the sea was two hundred and fifty dollars per ton, and forty porters were required to each ton. Tabora was also a centre for the slave trade.

The Germans built the Central African Railway from

Dar-es-Salaam to Kigoma on Lake Tanganyika. They had completed this railway and, when the World War began, had started the construction of an extension from Tabora to the Kagora River, in the province of Ruanda, now a mandate of Belgium. This will be completed by the British. It was the intention of the Germans to build a branch from this extension to Mwanza, thus giving the Lake Victoria territory an outlet by rail through Tanganyika Territory to the Indian Ocean. This also will be completed by Great Britain, and that probably at no distant date.

From Tabora the Central African Railway winds over a rolling country in a descent of about four thousand feet to the sea. It twists about like the India rubber man at the circus. The reason for this lies in the lax way in which the earlier contracts were let by the Germans. The Greek and other contractors were allowed so much per kilometer, with no stipulated distance between any two points. The dishonest contractor put as many miles as he could into each section, with the result that the line makes its way inland from the coast in a series of S's and double S's.

The later contracts, designed to prevent this sort of robbery, were made on the basis of cost plus a certain percentage of the amount to the contractor. But the contractors increased the cost in every possible way. They erected the most extravagant stations and had the loads of cement, lumber, and corrugated iron and other materials of which they were made brought through the bush on the heads of native porters far in advance of the rail-head. For this reason the smallest station far off here in the African wilds is sometimes marked by a handsome two-

story depot. It is usually in charge of a Hindu or a Goanese clerk, who serves as railroad agent and postmaster in one. The larger stations have white officials.

The building of the railway was carried on without regard to health or loss of life. It is said that every mile between Kigoma and Dar-es-Salaam cost the lives of two whites and no one knows how many blacks. The graves of the white men, marked with cement mounds and rude wooden crosses, may be seen all the way from Tabora to the Indian Ocean. The most deadly diseases that afflicted the labourers were black-water fever, typhoid, dysentery, and sleeping sickness.

Many of the natives were flogged to make them work, and at that time any white man had the right to give any native who displeased him fifteen lashes. If more punishment was demanded the case had to be taken before the police. In the interior practically every officer and soldier carried with him a *kuboka*. It was a strip of the thick skin of the hippopotamus, about a yard long, trimmed down at the sides to the diameter of one's finger and tapered at one end.

Such a whip is a terrible weapon. It is heavy and flexible and will cut like a knife. It requires only a light blow to draw blood, and the expert flogger can bring the *kuboka* down on the bare flesh with a peculiar twist that tears it to shreds. The natives were in such terror of it that they used to get down on their knees and beg for mercy if a German even shook a whip at them.

The officials claimed that it was impossible to keep the natives in hand except by such means. The blacks were subjected to all kinds of brutality, not only by the Germans but by travellers from other countries as well. One

The British territorial officials at Dar-es-Salaam live and work in handsome buildings erected by the Germans, who made their African capital one of the prettiest little cities of the world.

The hospital at Dar-es-Salaam was for years one of the finest and most completely equipped in East Africa. Like most of the other public buildings of the city, it is of German construction.

Farm produce and native goods of all kinds are brought in by the blacks to public market places that have been established here and there throughout the country, usually at the intersections of the highways.

The young native man is usually very proud of the "white man's clothes" he learns to wear when he comes into contact with civilized customs, and it is not unusual for him to return to his village proudly displaying spats and a wrist watch.

man told me of a trip he had made through German East Africa, when he had employed a large gang of Negro porters to carry his supplies. Said he:

"I never could tell whether the rascals were shamming or not. I remember one of my porters who was always playing off sick, and whom I had to whip almost from the start. None of my men liked to walk through the swamps after nightfall. It was rather dangerous, you know; but I had to hurry and I pushed right along. One evening this porter refused to go farther. He squatted down on the edge of a log and said he would not move. I had my men stretch him out and I flogged him again and again, but in vain. At last the fool put one of his arms behind him to save his back from the blows of the *kuboka,* and I struck his wrist and broke it. Of course, I could do nothing with him after that. He could not hold the load on his head and I had to leave him there in the swamp."

These were the words, not of a Belgian, a German, or a Britisher, although I have heard equally cruel stories from men of each of those nationalities, but of an American, and were uttered as though breaking a man's wrist and leaving him to die in the swamp were of no consequence whatever.

Dar-es-Salaam, at the Indian Ocean end of the railway, was the German capital of the territory and is now the seat of the British colonial authority in Tanganyika Territory. While there I stopped at a German-built hotel, a big, comfortable, stucco house of two stories, with deep verandas and a dining room open to the air. Its walls were decorated with roughly mounted antelope horns and native spears. In front of the hotel, under the acacia trees, was

a jinrikisha cab stand, each vehicle in charge of a half-naked black boy.

I took a ride through the town and found that Dar-es-Salaam has the best streets I have seen in this part of Africa. The wide thoroughfares are shaded with trees and bordered with flowers. There are great buildings of old-fashioned German architecture, which were erected when this was the capital of German East Africa and the pride of the Kaiser as the queen city of all his colonial possessions. The government house is far superior to anything in Uganda or Kenya, and the great white post office, with its tiled floors, makes one feel as though he were in Europe rather than in the Dark Continent. There are a half-dozen modern churches and several clubs. There are many stone villas, the residences of the officials, and there are some fairly good business blocks. The buildings all look new, clean, and attractive, and the town is one of the prettiest little capitals of the world. Indeed, I know of no place which compares with this except some of the cities of Java, and they are by no means so beautiful.

The Germans laid out Dar-es-Salaam in such a way that it seems to be a part of a great botanical garden. It is situated not far from the Equator and its vegetation is surpassingly beautiful. The buildings rise out of clumps of coconut palms, while the fan-like leaves of other palm trees whisper a welcome as one passes through the streets. There are many acacias and other trees loaded with blossoms. The roads are well kept. Every blade of grass and every weed is pulled out, and I saw a gang of native prisoners pounding the road bed after a rain to make it hard and smooth. They were bareheaded, bareshouldered, and barefooted, and as they moved along pounding the

ground firm with wooden stamps, which they raised and let fall in unison, they took up the whole width of the road.

The native section of Dar-es-Salaam is back from the harbour. Neither Hindus nor Africans are allowed to have houses in the European settlement but must occupy huts shoved off in the woods at the rear. The native town has about fifty thousand people, most of them members of the different tribes that live along the coast. A large number have come in from far in the interior as porters and servants. There are also many East Indians, who have gained a monopoly of the retail trade.

These people all dress in cottons, and are more fully clad than those I saw in Kenya Colony, Uganda, or around Lake Victoria. Some of the native women are fine looking, but they all mutilate their ears, and many scar their bodies so that the flesh stands up in great welts. The women comb their hair in such a way that they seem to wear hoods. They shave partings at intervals of about one inch all around the head, plowing furrows in their scalps. Many wear enormous ear plugs, which distend the lobes of the ear so that a silver dollar can be easily slipped in and out through them, and a few have nose rings and lip plugs. Their clothes consist chiefly of bright coloured prints, made in India and shipped here from Bombay.

Many of the natives are Swahili, like those I saw in Mombasa, noted as the brightest of the East African Negroes. They are of mixed Arab and Negro blood, descendants of the Arab settlers of Zanzibar who took native women into their harems. To-day practically all the coast dwellers, especially in the towns and villages,

are of Swahili blood, and even far in the interior one meets many natives who claim this distinction.

These people speak a mixture of Arabic and Bantu. They have many quaint proverbs, some of which are much like ours. For instance, the Swahili says: "Spilt water cannot be gathered up," and in place of the expression, "To carry coals to Newcastle," he said: "To send dates to Arabia," or "To take wails to the mourning ceremony." One frequently hears the words, "In haste is no blessing," for the Negro hates nothing so much as to hurry.

Two words are forever on the Swahili-speaking Negro's lips. These are *bado* and *shauri*. The first means "not yet" and it holds up the traveller at every turn. His breakfast is not yet prepared, the headman he has engaged for his trip into the bush is not yet quite ready, the bananas he is depending on for his lunch are not yet ripe. The missionary hears over and over again that the almost-persuaded convert is not yet desirous of baptism.

Shauri means a talk or discussion. The master is asked if his "boy" may have a *shauri* with him on a "little matter." Or there is to be a *shauri* in the village to investigate a theft, a murder, or a case of witchcraft. Or perhaps the *shauri* will be a gathering at nightfall around a fire, where extempore verses will be made, the whole group joining in a chant-like chorus at the end of every few phrases. Around the circle will pass the fiery, colourless coconut wine of the coast or the banana beer of the interior.

The German officials delighted in holding *shauris* on any pretext. There is a story at Dar-es-Salaam that when the name Wilhelmshoehe was given one of the sections of

Making the "full dress" toilet of the Swahili is a lengthy and complicated procedure. When the tightly plaited coiffure is completed, the skin will be anointed with aromatic oil, and the arms and ankles adorned with gaudy bracelets.

During the many years when the Germans dominated the trade of East Africa, they built up a great native demand for the strips of gayly printed calico known as *kangas*, two of which make a complete outfit.

German East Africa, the district commissioner summoned the natives to a *shauri*. Elaborately, painstakingly, and pompously he explained the new name and extolled the Kaiser to the skies. After the lecture was over, the officer asked several of the headmen whether they had understood him. "Oh, yes," they said. And could they remember the new name? "Oh, yes," they chorused. "Whisky-soda." At least that was one word they knew from the habits of the white men.

The Swahili, like other natives, are fond of animals. Everywhere in East Africa I have found queer pets. Think of holding a baby leopard in your lap, or of lifting up a lion by the nape of the neck! This is what I have seen done in the last week. The baby lion was at a hotel here. He was tied by a clothesline and I was able to pet him without being hurt. I took hold of the skin of his neck and picked him up off the ground, although it strained my arm to do so. On Lake Victoria I saw a pet hyena, and at one of the native villages found several pet antelopes.

Here in Dar-es-Salaam I know a man who owns a pet leopard. It is only a few weeks old and as tame as a cat. The captain of one of the Lake Victoria steamers has on board several pet monkeys, a dog-faced baboon, and some parrots. The parrots have silver-gray feathers on their bodies, and bright red wings and tails. They talk in the native language and whistle, I should say, in Esperanto. Pet sheep and goats are common among the Africans, and there are certain tribes which train a sheep to follow its master about and come to him when called. In Uganda sheep are often petted. They are fat-tailed animals, with hair as coarse as that of a tin-can-fed American goat.

They are usually white in colour, although some are as red as a blooded bay horse.

About the queerest pet bird I have yet seen on this continent is the whale-headed stork of Uganda, one of which has been sent to Khartum and is kept there in the gardens of the Sirdar. This bird is found all around Lake Victoria, and especially at the source of the Nile. It is as big as the largest turkey gobbler, with a head that looks as though it had been chopped out of a telegraph pole and then hung to its neck. This stork walks about on its long legs with great dignity. It looks sleepy and does not seem at all afraid. I took a snapshot of the Khartum bird with my camera, standing within a few feet of it at the time. It did not budge, but gazed at me out of its bleary eyes as though it thought me a fool to want its picture.

However strange their other pets, no native, not even the intelligent Swahili, will touch a chameleon. It seems strange that they should have this fear and hatred of a harmless little lizard. In some parts of the country it is a point of honour to kill a chameleon whenever one is found. The mouth is forced open by pressure on the stomach with a forked stick and a few grains of snuff are dropped into the jaws. Soon the poor reptile turns black and dies in agony. If one asks a native why this is, he will simply reply, "It is custom."

Perhaps the custom is connected with the tradition that it was the chameleon's fault that death first came into the world. The tale goes that the Great Spirit sent out a salamander and a chameleon to the dwellers on earth. The salamander was told, "Hasten to the people and tell them they must die." The chameleon was instructed to "tell the dwellers on earth that they shall be happy and

live forever." They started out together and the salamander went straight on his way. But the chameleon dawdled by the road and forgot his duty, so that when he arrived on earth, he found the salamander already there, with grief and death in his train.

CHAPTER XV

ZANZIBAR, ISLAND OF SPICES

HAVE you ever heard of Judge Riley of Virginia? He was one of the noted figures in Washington during the administration of Grant, Hayes, Arthur, and Garfield. A carpet-bag official at the close of the Civil War, he came in for one of the foreign appointments that were given out by the Northern president to the Republicans of the South. He was first sent as consul to one of the little South American republics and after that was given the consulship to Zanzibar. Before leaving Washington for the latter post he treated all his friends, dilating the while on the splendours of the court of the Sultan and his harem of black-eyed houris, whom he expected to see. He then left, but at the end of six months came back weary and worn and sad. When asked how he liked Zanzibar, he replied:

"Zanzibar! Zanzibar! Where in the —— is Zanzibar? I have been cruising over the world for the past six months and, for the life of me, I can't find Zanzibar!"

I have been more successful than Judge Riley, for I have found Zanzibar, and have even seen its Sultan, though not his harem. For our consuls of the future I would say that Zanzibar is a coral island about one sixth as large as Porto Rico, situated in the Indian Ocean three or four hundred miles below the Equator and about twenty miles

from the coast of Tanganyika Territory. It can now be reached by half-dozen steamship lines.

In coming to Zanzibar town from Dar-es-Salaam, I steamed north along the coast for about thirty miles. As I approached the city from the sea it made me think of the towns of southern Europe. The shore is lined with three-story buildings, but of stone or brick, covered with stucco, and painted in all the colours of the rainbow. There are blue buildings, white buildings, green buildings, and yellow buildings, all mixed together. Zanzibar is the largest city in all British East Africa, and, seen from the water, appears twice as big as it really is. It looks both imposing and beautiful. Right out of the centre on the edge of the sea rises the Government Office. It seemed to be marble, but as I came nearer it dwindled in grandeur and I saw that it was a three-story wooden building, painted pale yellow. Running around it are galleries about twenty feet wide and for all the world like the porches of a summer hotel. The roof is red and seems to cover a roof garden, thus emphasizing the hotel effect.

For years this building was the palace of the Sultan, who lived here with his numerous wives. I do not know how many dusky ladies there were in the harem; His Highness is a Mohammedan and keeps such things to himself. He probably has a large number of females in his present palaces, and I am told there are still thousands of women who are kept in secret slavery by the Arab officials and merchants here.

I am not sure just what the Sultan is worth, but I do know that he lives in considerable state, and keeps up magnificent stables filled with the finest of Arabian horses. His income is derived both from his own private estates

and from the British government, which holds the protectorate over his dominions on a perpetual lease, for which they pay him a fixed sum each year. His purse is kept separate from the general revenue of the country, and the tax money is spent by the British.

The glory of this Sultanate, which once controlled almost the whole of East Africa, is fast passing away. The Sultan of Zanzibar formerly ruled all the territory reaching as far west as Lake Tanganyika, and also the whole of the coast lands of what is now Kenya Colony. His dominions extended almost to Arabia. He was one of the largest slave dealers in the world, and in Zanzibar city was a great slave market where some of his ancestors sold Negroes for the American market. Another prominent slave dealer of this part of the world was Tipoo Tib, who aided Stanley in his exploration, and after whom a hotel at Zanzibar was named. When Tipoo Tib died, he left more than three hundred black wives. The British have abolished slavery, but I understand that there are still some natives who are practically slaves, although nominally free.

On the site of the slave market now stands the Anglican Cathedral, its altar directly over the old whipping post. Above the pulpit is a crucifix carved from the wood of the tree at Lake Bangweolo under which the heart of Livingstone was buried by his native followers when he died in 1873. Another part of the tree, containing an inscription cut out by the natives, is now preserved by the Royal Geographical Society in London.

A High Commissioner and a British Resident administer the government of Zanzibar and its sister island of Pemba, which lies a little to the north. There is an advisory

council consisting of His Highness, the Sultan, as president, the British Resident as vice-president, and three official and four unofficial members. Decrees of His Highness are binding on all persons only when counter-signed by the British Resident.

Although the British act as rulers, the real lords of Zanzibar are still the Arabs, whose ancestors took the island from the Portuguese during the sixteenth century. They own the greater part of Zanzibar and they work the native Africans to the limit. They go about in turbans and gowns, and from the people one sees here the city looks more like a part of Egypt or India than of East Africa. Many of the Arab merchants dye their beards a brick-dust red, and I see scores of women who go about completely covered by yellow gowns that fall without a break from their heads to their feet. Each girl looks out through a little net-work of white cords woven so closely over a hole not larger than a visiting card that one cannot see the eyes behind.

About one fifteenth of the inhabitants of Zanzibar Protectorate are from British India. There are more than ten thousand Hindus, and many Klings, Parsees, and Brahmans. These people come from all parts of Hindustan, and have many strange costumes. I see little black girls whose arms and legs are loaded with gold and silver jewellery. They wear tight pantalets, fringed with lace, that fall to their ankles, and coats that come to the knees. There are dark-faced Indian women with nose buttons of gold and silver, and fat, greasy-looking Indian men who strut about wearing pill-box caps made of velvet and cloth of silver, long coats buttoned up to the throat, and under them calico pantaloons that fit tight to the skin.

Others have round-about jackets with gold studs down the front, which look for all the world like dress shirts with the tails cut off.

The Hindus not only do most of the retail business of Zanzibar, but through their hands passes the bulk of the retail trade with all East Africa. In the city itself are whole streets lined with their bazaar-like stores, and their peddlers go all over the island. Their chief customers are the natives.

Although the Arabs are the nabobs and the Indians the traders, the vast majority of the people are Africans, mostly Swahili. They are fine-looking blacks. The men and women are straight, and the young girls in their long white cotton gowns are quite handsome. Many of the men speak a little English; I have one as guide who knows enough of our language to tell me something of the city and its people as he goes about with me.

The streets of Zanzibar are narrow and winding. Some of them are not wide enough for a carriage or a motor-car. The automobiles must honk their horns continually, and the cabs have bells like dinner gongs, which the drivers keep ringing as they go along, to warn the people to get out of the way. The buildings are high, with barred windows. They have enormous doors, studded with big-headed nails, that make every house look like a prison. The architecture throughout is Arabian, and the whole place is a combination of squalor and splendour. Some of the shabbiest houses have doors of teakwood so beautifully carved that they would be an ornament to a king's palace, but as likely as not they open into the meanest of shops and warehouses. The finest house in the city is the home of the British Resident.

Along the narrow, crooked streets of Zanzibar, many of which are not wide enough for carriages or automobiles, one often sees doorways and balconies of the most exquisitely carved teak adorning the meanest of shops and warehouses.

The little island of Zanzibar, off the east coast of Africa, is the world's chief source of cloves. This spice is obtained from the dried blossoms of a tree that is here cultivated in huge plantations.

Most of the natives of Zanzibar city live across the Darajini bridge in the native town of Ngamba. Outside the city I have seen many of their thatched villages as I have motored through the island. These people furnish practically all the labour of Zanzibar, working the plantations, taking care of the clove trees, and cultivating the vanilla estates. The blacks are also employed by the traders to carry goods into the interior.

The island of Zanzibar is about fifty miles long and fifteen miles wide. The land is low and has a dense vegetation; it is in the heart of the tropics and noted for the fertility of its soil. It is the chief clove producer of the world, and flavours about three fourths of all the cakes and pickles of the universe. The clove output of Zanzibar and Pemba averages fourteen million pounds, or enough to smother the scent of all the liquors imbibed by man since drinking began.

During my stay I have visited some of the spice plantations. Cloves come from trees that are set out in orchards and cultivated. At the age of six years the trees begin to have blossoms, which form the cloves of commerce. They are bright red and full of perfume. When in full bloom they are picked and then smoked over slow wood fires. During the smoking they turn from red to brown, and when cured are almost black. After they are well dried they are packed in the bags in which they are sent to Europe and the United States.

Next to cloves, the most important product here is the coconut. It is estimated that there are in Zanzibar and Pemba about fifty thousand acres under coconut cultivation, with two and a half million coconut palms. One of the important exports is copra, the dried meat of the

coconut, which is used in making soap, oil, and cocoa and nut butter. Much of it is produced by small growers with inadequate drying facilities, and the quality is inferior to that of the copra from the East.

As the centre of the Arab power, Zanzibar dominated East African trade from the beginning of the nineteenth century until quite recently. Except for its cloves and coconuts, the island contributes comparatively little to the actual commerce of the world, but it serves as a gigantic warehouse for the imports and exports of the whole East African coast. Of late years, chiefly because of the development of the mainland, Zanzibar has lost some of its importance as a distributing centre and port of transhipment. But, from the very fact of its geographical position, it will continue to control local traffic, that is, the trade with the small ports up and down the adjacent mainland coast. It has a well-protected harbour, although freight and passengers from large steamers are still landed in lighters.

As far back as 1836, before any other foreign nation sent representatives here, Uncle Sam established a trading consulate at the court of the Sultan of Zanzibar. At that time we began to send cotton goods and hardware for distribution along the east coast of the African continent. That early missionary trade venture is still bearing fruit, and American cottons are known everywhere in this part of the world, although India and Japan lead in furnishing them to Zanzibar. The most important commodity sent here by the United States is petroleum.

Many other American goods are sold through English exporters who study the wants and tastes of the natives more than we do, and make patterns to please them. The

Germans built up a large demand for pieces of calico about two yards long and a yard and a half wide, printed in bright colours. They are called *kangas*, and two of them form a complete dress for a man or a woman. One goes around the waist and another about the body under the arms or over the shoulders. There is a change in the fashions of these cottons from time to time, and the people want the newest styles and colours. Here in Zanzibar I see some cloth printed in patterns like playing cards, and others covered with animals, especially lions or leopards.

CHAPTER XVI

ELEPHANTS AND IVORY HUNTERS

DURING the last six months I have been travelling through lands of ivory and elephants. I saw tusks for sale in the Egyptian Sudan; at Mombasa I was shown fifty thousand dollars' worth of ivory in one pile, and during my travels through Uganda and Tanganyika I passed many long lines of porters carrying elephants' tusks on their heads or tied to poles that rested on their shoulders. Much ivory now comes in to Lake Victoria and thence goes over the Uganda Railway to Mombasa. A great deal goes to Tabora in the centre of Tanganyika Territory and thence out to the port of Dar-es-Salaam by railroad. In a single year sixty-five thousand elephants have been killed in Africa, and more than a million and a half pounds of ivory taken from them. Of this a great deal was from Mozambique and Angola, or Portuguese West Africa, and a goodly portion was from the valley of the Congo. Much of it was exported through Zanzibar, which still handles nearly a half million dollars' worth every year.

Ivory was once the most important export of East Africa, and Zanzibar was for years one of the chief ivory markets of the world. The dealers here had their buyers scouring East Africa, trading beads, cottons, and other merchandise to the natives in return for ivory. In those early days the elephant tusks were all carried down

For many decades Zanzibar was the eastern terminus of the slave route from Lake Tanganyika, over which thousands of elephant tusks were carried each year by the blacks, both ivory and slaves being sold here.

Although Zanzibar is now ruled by the British, the richest merchants and plantation owners are still the Arabs, whose ancestors took the island from the Portuguese more than three centuries ago.

to the coast on the heads of the porters. The old slave route then began at Ujiji on Lake Tanganyika, crossing German East Africa to Bagamoyo and ending at Zanzibar. When the ivory caravans reached their destination, both the ivory and the men who brought it in were sold, the latter being known in Zanzibar as "black ivory." Many of the slaves were females, and were bought to supply the harems of Egypt and other Mohammedan countries of North Africa, as well as of Arabia, Syria, and Turkey. The trade in "black ivory" has, of course, long since been outlawed, and the white ivory is each year growing more scarce.

One of the chief sources of supply for the world's ivory markets has been what is known as dead ivory, in contrast with that taken from the bodies of freshly killed elephants. Ivory has always been an evidence of wealth in Africa, and many of the native chiefs piled it up as misers hoard money. Some of them buried it near their villages, while others made stockades of ivory tusks about their dwellings. In addition, large numbers of tusks came from elephants that had been killed by lions and other wild beasts. Their bones lay where the huge animals fell, the earth and leaves often covering them for years. The hunters say that none of the dead ivory comes from elephants that appear to have died a natural death, giving rise to the belief that the animals, when about to die, lie down in some swamp or lagoon, where their bodies soon became covered by the mud and water.

The pygmies killed many elephants with poisoned arrows, but, not knowing the value of the tusks, left them lying where they fell. Some of this dead ivory was injured by the forest fires, but that imbedded in mud or covered with vegetation did not materially lose its value.

To-day most of this buried ivory has been dug up by the tusk hunters, and there are few native chiefs who have not sold all their stocks.

The great herds of elephants that once roamed over much of the African continent have now been largely depleted. As the white settlements have spread into the interior the animals have been exterminated throughout vast areas because of the damage they do to crops. Large numbers have been killed by sportsmen, while a wholesale slaughter was carried on for years by the ivory hunters. Indeed, even with the present restrictions on elephant hunting, it is predicted that it will not be more than two or three decades before there will be no more tusk ivory available in Africa.

The chief sources of African ivory to-day are Abyssinia, the Belgian Congo, Mozambique, and the Anglo-Egyptian Sudan. There are also herds of elephants about the slopes of Mount Kilimanjaro, and the forests of the Great Rift Valley are a favourite hunting ground. In all these regions, as well as in many others, the authorities have put into force regulations for the preservation of these animals. There are about a dozen game preserves in which they may not be hunted and killed. In Kenya Colony it costs two hundred and fifty dollars to get a license to shoot elephants; a hunter is limited to only two in a season, and he must not kill baby elephants or cow elephants. In practically all the countries of Central and South Africa a license is required to shoot any kind of big game, and in the case of elephants, part of the ivory must be given to the government. It is known that much of the ivory that comes from Abyssinia is smuggled out of the country to evade this requirement. Both Kenya and

Tanganyika forbid the exportation of tusks weighing less than thirty pounds, and no tusk can be sent out of those countries without government approval.

Statistics show that the average weight of the tusks exported from Africa is decreasing each year, and that specimens of more than one hundred pounds are now very rare. The largest are from elephants killed in Uganda and the Congo; the average in Abyssinia and the Sudan is not more than forty pounds. Nevertheless, hunters sometimes find an old bull that yields three or four hundred pounds of the choicest ivory, worth more than a thousand dollars.

The heaviest elephant tusk of which there is any record is in the British Museum of Natural History. It is more than ten feet long and weighs two hundred and twenty-six pounds. The longest and most beautiful tusks in existence are said to be a pair from an elephant more than eleven feet tall that was shot near the southern border of Abyssinia. They were for a time in the possession of King Menelik of that country, and were later taken to the United States. The longer measures eleven feet five and a half inches, and has a circumference of eighteen inches.

Most of us have felt at the hands of a dentist the awful wrench of an uprooted molar. The elephant's tusks are really his teeth, but he rarely loses them until he is dead. The tusks, like our teeth, are fitted into bony sockets. The roots reach almost up to the eyes, and two feet of a tusk eight feet long may be imbedded in the animal's skull. To get it out, the elephant's head often has to be chopped to pieces. In addition to the tusks, the elephant has six great teeth on each side of the jaw, above and below. These are almost as firmly imbedded as the tusks themselves.

The tusks are usually strong and elastic, but they are partially hollow, and the elephants often break off the ends in plowing up roots and tearing down trees, or in fighting one another. As ivory is always sold by weight, the traders have to be careful, in buying from the natives, to see that pieces of iron or bits of stone have not been driven into the hollows of the tusks to make them weigh more.

Small tusks and broken pieces of ivory now bring about a dollar a pound, while the largest sell for three or four times as much. The best of the ivory goes to the United States, which annually imports more than a quarter of a million dollars' worth, and the second and third class tusks are disposed of in Europe. The chief raw ivory market is Antwerp, which always keeps large stocks on hand and holds auctions each year that are attended by buyers from all over the world. The fourth grade ivory is sent to East India to be made into filigree work, and the poorest of all goes to China, where it is used for inlay work on furniture and boxes.

The very best quality of ivory is employed in the manufacture of billiard balls, piano keys, combs, and fan sticks. The hollow, or bangle, tusks are often just the right size to be cut into bracelets and armlets that are worn both by the African natives and by the fashionable women of Paris, London, and New York. Much of the ivory is made into the little statuettes cut out by the Japanese and Chinese. The centre of the ivory-carving industry is at Canton, China, which imports its raw material from India, Burma, and Siam, as well as from Africa. In Sheffield, England, I was once shown one hundred thousand dollars' worth of ivory that was being sawed up into strips to be used for knife handles. In such work every scrap of

At some of the ports of Mozambique, where rough seas and lack of harbour improvements make landings difficult, passengers are put ashore from the steamers in huge baskets swung from cranes.

Lourenço Marques is not only the chief port of Mozambique, but has one of the best harbours in Africa, and serves as an eastern gateway for the gold fields of the Transvaal.

the material is saved, the shavings and dust being valuable for making ivory black or artists' pigments.

Another source of the ivory used in making handles for umbrellas and walking sticks is the horns of the rhinoceros. Hippopotamus teeth also have a commercial value. One of the most interesting sources of ivory ever found was in the tusks of the mammoths that lived ages ago in the tundras of Siberia. Their bones were preserved in the frozen soil of northern Asia, and it is said that in some cases the entire carcasses of the animals were found intact. The first of this frozen ivory was discovered more than three hundred years ago, but as late as 1872 more than sixteen hundred mammoth tusks were sold in a single year.

I have met here ivory hunters who have not only shot elephants, but have eaten them. A good-sized animal often weighs as much as six or seven tons, and when one is killed the natives for miles around come in and have a great feast. They cut up the huge beast with axes and knives and tear the meat off in strips. Some of it is made into elephant steaks and roasts, and some smoked as we smoke beef. In this form it is known as "biltong" and is often carried on journeys by hunters and travellers. The feet and trunk of the elephant are considered especially appetizing. The former are prepared by making a fire in a hole in the ground and laying them on the burning coals. Some sticks are then placed over the top of the hole and a layer of green leaves added. This is covered with earth, and the feet are allowed to cook for several hours. When taken out, the jelly-like meat is so tender that it can be scooped out of the skin with a spoon. The ordinary elephant steak is black and looks and tastes a little like corned beef.

CHAPTER XVII

MOZAMBIQUE

LEAVING Zanzibar, I came down the coast of the Indian Ocean by steamer, calling first at Mozambique, a port for the great Portuguese province of the same name, and formerly the official headquarters of the Portuguese East African government. As a centre of the slave trade, and the residence of the chief Portuguese officials, it was for years one of the great ports of the continent and by far the most important city of the colony. The little island on which it is situated is only a quarter of a mile wide and not more than a mile long. It is three miles from the mainland, and native boats carrying food and supplies are always moving back and forth.

Mozambique has sidewalks paved with cement, and its roadways are macadamized. The bazaars in which slaves used to be exposed for sale have now disappeared, yet in some respects no town in Africa has changed so little in the last few hundred years. The heavily bolted doors and the barred windows of the sixteenth century are still to be seen, and now and then one may even catch a glimpse of the original window panes of mica used for lack of glass. There is a castle here that is a remarkable monument to the enterprise of the early Portuguese settlers, built as it was more than three hundred years ago of stone brought eight thousand miles in the small craft of the period.

The town has a fort and public buildings, but the streets are practically deserted. Many of the good houses are vacant, and others have been turned into petty trading stores.

As we steamed along the coast we stopped at times to take on board gangs of native labourers. At one place we anchored far outside the bar, the Negroes being brought out in a steam launch. They were transferred to our ship by means of a great basket, as large around as a hogshead and about ten feet in height. The natives, a dozen at a time, stepped into the basket through a door at one side. The door was then closed and the basket, with its human freight, was raised to the deck of the steamer by a derrick. The natives howled in unison as it rose, and they thought they were killed when it came down with a thud on the deck.

I was told that these men were being taken to the port of Lourenço Marques, from where they would be sent by railroad to the mines of the Rand in the Transvaal. They are employed on six-month contracts, which may be extended, although they usually go back home after serving less than a year. Because of the shortage of labour in Mozambique, there is strong agitation against recruiting natives to work outside the colony. So far, this has had little effect, and Portuguese East Africa continues to be one of the chief sources of the labour supply for the Transvaal. At one time numbers of Chinese coolies were imported, but the experiment proved a failure and the men were sent back home.

I ended my trip down the coast at Beira, one of the chief ports of the colony. It is a thousand miles or so south of Zanzibar. Mozambique extends along the Indian

Ocean for as far as from New York to Omaha, and at the north it goes inland as far as the distance from Washington to Boston. It is larger than Texas and would make considerably more than nine states the size of Ohio, Kentucky, or Virginia. It has a native population estimated at two or three millions, but no accurate census has been taken, and, although the Portuguese have owned the country for more than three hundred years, they know almost nothing about it. The greater part of it has been leased to the Mozambique Company and another section to the Nyasa Company. Beira belongs to the Mozambique Company, which fixes the taxes and pays Portugal for the privilege of exploiting the town. It runs the post office and even issues its own postage stamps.

Beira is the terminus of the Beira-Mashonaland Railroad, and the eastern gateway to Rhodesia and the vast country beyond. The harbour has been greatly improved in recent years, and a large area of land has been reclaimed by an embankment along the shore. Formerly the landing was so rough that the passengers were transferred from the steamers to launches in a basket like the one I have already described. With better harbour facilities and railway connection with the interior, Beira has grown in size and importance. It has a population of more than four thousand people, including a thousand whites. The main part of the town is connected with the waterfront by miniature railway tracks on which run cars that are really wheel chairs, pushed by natives. Because of the deep sand, jinrikishas cannot be used here, and every man of means has his own chair car.

The most important port of Mozambique is Lourenço Marques, on Delagoa Bay, five hundred miles farther to

the south. Its harbour, which is one of the best on the African continent, is twenty-five miles long and about twenty-two miles wide, reminding me of Manila Bay in its extent. Indeed, it could contain at one time all the ships that come to East Africa, and have room to spare. Delagoa Bay was awarded to Portugal in 1872 by arbitration of conflicting British and Portuguese claims.

Lourenço Marques began to grow when the railroad connecting it with Johannesburg was built, and its progress has been steady from then until now. It is by far the shortest route from the sea to the gold fields. The distance to Johannesburg from here is only three hundred and ninety-four miles, while from Durban, the chief port of the Union of South Africa, it is four hundred and eighty-three miles, and from Cape Town more than one thousand miles. The Portuguese government has done much to improve the harbour. It has built a quay more than a mile long, and has equipped it with all modern conveniences for loading and unloading vessels. It has put up great warehouses and has also constructed a dry-dock and other marine works. The port is growing in importance as a coal bunkering point.

The city has superseded Mozambique as the capital of the colony, and has a white population of more than five thousand. It is lighted by electricity, and there are lines of electric tramways connecting the different sections. The great marsh behind the city has been drained and the mosquito plague practically wiped out. The beautiful Polana beach promises to become a health and pleasure resort for people from the interior, and it is now thronged during the winter, that is, from May to September. The beach has one of the finest stretches of sand on the coast

of the Indian Ocean, and compares favourably with the beaches at Durban and Port Elizabeth, farther south.

I took the train at Beira to go westward across Mozambique into Rhodesia. The first of the journey was through lands largely covered with water. It had been raining for a week and the country was flooded. Some of the bridges had been swept away, and the road was so unsafe that the engineers did not dare to go over it in the dark. The result was that our party was halted in the wilds and I was forced to spend the night at a place called Bamboo Creek.

It was there that I met an American from Mississippi managing an experimental cotton plantation away out in the heart of these African lowlands. I talked with this man as to the prospects of raising cotton here, and learned that there are vast tracts of available land, both in this region and farther south. Some cotton has been grown on the Maputo River, not far from Lourenço Marques, and experiments are being made in other parts of Mozambique with both American and Egyptian seed. A steam plow is used to break up the ground, and then American cultivators are run over it. The plants ripen at different times, the Egyptian variety later than the American, and the picking season continues through the summer. I was told that cotton raised at Bamboo Creek has a longer fibre than that from the same seed grown in America.

The plantation is worked by about one hundred and fifty Negroes, who are hired through the Mozambique Company for a few dollars a month per man. The company takes as a commission a certain percentage of the wages paid. This is the way all labour is furnished here. The men work hard from sunrise to sunset, and are proba-

bly as good hands in the cotton fields as are our Negroes at home. The look much like our coloured people of the South, but they are on the whole better formed and more muscular.

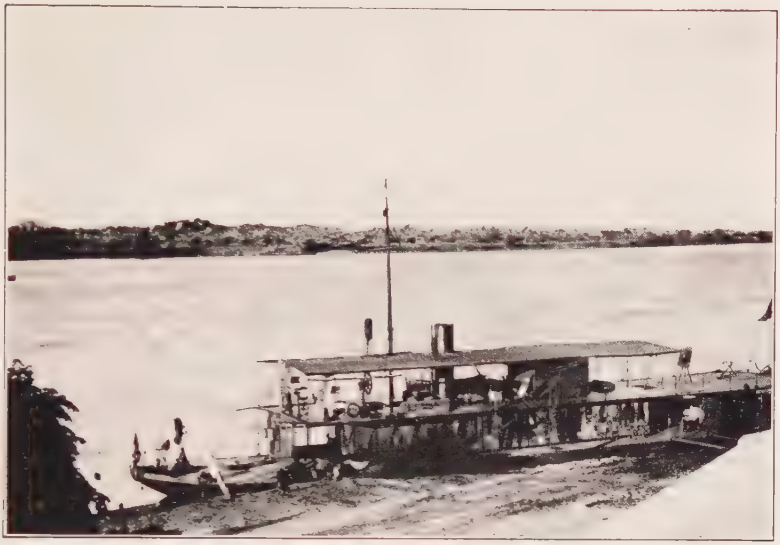
If a man shirks or refuses to work, he is sent to the military commandant for punishment, and if he will not work after that he is put in jail and another man is sent in his place. A common form of punishment used among the natives is slapping a man on the hand with a web strap, which sucks up the skin. It is very painful, and usually incapacitates the victim for a day or so.

A system long in use in Portuguese East Africa, but now gradually being abandoned, is the *prazzo* system. The country was divided into districts known as *prazzos*. These were put up at auction, the successful bidder having the right to levy a tax of so much on each native, who had to pay that amount in cash or work. The contractor also could force the people to do a certain amount on the public roads and on building houses for the officials. He had, in addition, other rights that made the system little more than a legalized slavery. The taxes were often paid in merchandise, and the value of the work done by the Negroes was measured by American or English cotton cloth, the price of which could be regulated largely by the collector. A part of the labour was the hunting of elephant ivory and the gathering of rubber, both of which were exceedingly profitable. I am told that the abuse of the natives in the more remote districts was terrible, and that the people had comparatively few rights that the tax collectors were bound to respect. It is said that slavery is still common in some regions, although it is not recognized by the government and is contrary to law.

The only sign of a town at Bamboo Creek is the hotel. It is a tin shanty of one story with a bar-room in front, a dining room at the side, and a kitchen in the rear. The bar-room is filled with mementos of big game hunting. The huge skull of a hippopotamus lies on one end of the counter, and there are lion skulls and leopard skulls among the whisky and brandy bottles at the rear. At one end of the room is a stuffed zebra with a stuffed leopard on top of it, while about the walls are the heads and horns of antelopes. The bartender sells hippopotamus hide whips and canes at extravagant prices, and he offered to lend me his rifle to shoot big game. He said there were no end of rhinos and hippos near by, and that a lion could be found almost any night within a few miles of the hotel.

Besides the American cotton planter, the party staying at the hotel included the chief engineer of the Rhodesia railways, another young British civil engineer, and a railroad official in charge of a line away up on the Zambesi. There were also a millionaire Wall Street broker making a pleasure tour of Africa, an English commercial traveller, and a South African miner on his way to the Transvaal. We soon became acquainted and after dinner staged a little entertainment. The chief engineer played the old-fashioned organ and gave a concert ranging from the latest American ragtime to the once popular "Sweet Marie," which was written by Cy Warman when he was the engineer on a railroad near Denver. That song, composed by one engineer long ago in the wilds of the Rockies, was sung to us with great gusto by another engineer in the African wilds.

The songs were followed by big game stories, including



In the interior of Mozambique order is preserved among the natives along the Zambesi by the Portuguese troops stationed at Tete and by a government gunboat that patrols this section of the river.

Everywhere in the swampy lowlands of tropical East Africa are to be found hippopotami, which frequently leave their watery haunts for a marauding tour through the fields of the near-by plantations.

Southern Rhodesia is a land of beautiful mountain ranges much like our Alleghanies, high rolling grazing lands, and fertile valleys containing orchards and fields of wheat, tobacco, and corn.

tales of lion and elephant hunts and struggles with hippos and rhinos. This region has many lions, and the other day some of the natives killed a young leopard with their hoes. There are hippopotami that make tracks as big around as a dinner plate, and if they get into the cotton fields they ruin the plants. During the rainy season one has to be careful when wading about or he is liable to lose a leg to a hungry crocodile. The Central African engineer told a story of a crocodile he had recently shot. He said it had evidently been a great man-eater, for he had found forty-eight native bracelets and anklets in its stomach. His presumption was that the reptile had eaten forty-eight Negroes so ornamented, to say nothing of numerous others who had taken off their jewellery before they went in to bathe. However that may be, it was a good story.

CHAPTER XVIII

THE LAND OF CECIL RHODES

ALTHOUGH the distance from Beira to Salisbury, the capital of Southern Rhodesia, is only three hundred and seventy-four miles, the recent floods of some of the rivers had created such havoc along the line that it took me two days to make the trip. The first two hundred miles was through the low and unhealthful Portuguese territory. I rode for hours through swamps where, I was told, the building of the road had cost a man's life for every tie under the track, and I was shown one bridge where eight men were said to have been eaten by crocodiles during its construction. Now and then we passed through swarms of locusts, and our car windows had to be covered with wire screens to keep out the mosquitoes.

As the train approached the western boundary of Mozambique the grade rose rapidly, and at Umtali, across the border in Southern Rhodesia, we came into mountain regions comparable to the most beautiful of the Alleghanies. The track wound this way and that in horseshoe curves. After passing through thick forests, we finally reached a high, rolling prairie covered with luxuriant grass. There were but few farmhouses or native villages to be seen, and practically no fences anywhere. Indeed, the country looks almost as it did when God made

it, although it seems to have plenty of water and to be capable of supporting a large population.

When I reached Salisbury, I found it to be much like some of our best Southern towns of four or five thousand population, except that these Salisbury buildings are finer, more artistic, and more substantially built. The walls are chiefly of stone and brick, the roofs being of sheet iron. The residences are bungalows with wide verandas and low, overhanging roofs. Many homes stand in gardens filled with the flowers and plants of both the tropical and the temperate zones. There are roses and morning-glories, as well as flowers that would thrive in Florida or Cuba.

There are many large stores, but the window displays are few and far from artistic. One can buy anything he needs, including many American products. I see our canned goods and cottons among the articles in the windows, and outside the farm implement stores are plows from Moline, Illinois, and reapers and mowers from Chicago and from Springfield, Ohio.

Salisbury is a modern town, with a handsome government building, athletic and hunt clubs, amusement places, hotels, and three newspapers. It has its society set, the members of which have provided themselves with cricket grounds, golf links, and tennis courts. The high fences of the latter are covered with morning-glories, and the balls bound back from masses of green leaves spotted with flowers of bright blue. The little city has a library, several banks, and a chamber of mines, as well as a fine two-hundred-thousand dollar hospital and a half-dozen churches.

This great territory of Rhodesia remains as a monu-

ment to the efforts of Cecil John Rhodes to extend the rule of the British Empire in South Africa. Rhodes first came to Africa in 1870, having been obliged to give up his studies at Oxford because of poor health. Although afterward able to go back to England to complete his university course, he had decided that his life work was in Africa. He had already been prominent in the political history of the Cape for several years when, in 1888 and 1889, he acquired the vast territory that is now Rhodesia and organized the British South Africa Company to administer it. He had conquered some of the tribes and made treaties with others, and at the end had added to the British Empire a principality greater than France and Germany combined.

The British South Africa Company is perhaps the largest land and development syndicate in the world. It is comparable to the Dutch company that formerly owned Java, and with the East India Company, which had so much to do with making Hindustan a British possession. At the height of its power it was far greater than the Hudson's Bay Company, and prospectively its riches were beyond the dreams of avarice. It was started with a capital of five million dollars, which in 1920 had increased to forty-five millions. It built thousands of miles of railroads, founded numerous towns, opened up and sold farm lands, and developed mines that have yielded millions of dollars' worth of gold.

This great territory is divided by the Zambesi River into Southern and Northern Rhodesia. Southern Rhodesia is only half the size of its northern neighbour, but has a much larger white population and is the more important of the two. Although thriving under company rule, a movement in favour of self-government rapidly

Only three or four score years from a state of savagery, Rhodesia is agriculturally one of the most progressive of John Bull's colonial dominions, and modern machinery and methods are everywhere in evidence.

More than a million pounds of tobacco, both Virginia and Turkish, are raised every year in Rhodesia. Much of the crop is made into cigarettes and smoking tobacco in Bulawayo, the chief commercial city of Rhodesia.

gained strength after the World War. In 1922 a vote was taken to determine whether the territory would join the Union of South Africa or become a separate British dominion. The decision was in favour of the latter course, and a year or so later Northern Rhodesia also changed from charter rule to a British protectorate.

The British South Africa Company, in handing over the administration of these territories, surrendered its claim to all public works and buildings in Southern Rhodesia for a sum of about eighteen million dollars. It gave up its monopoly rights in the development of the country, but retained its commercial, mineral, and railroad rights and several million acres of land in both Southern and Northern Rhodesia.

A bird's-eye view of the country would show that Southern Rhodesia is an empire in itself. Larger than Great Britain and Ireland, it is full of minerals and has great areas of good land. Much of the country is better fitted for stock raising than farming, but there are large areas that will produce corn, tobacco, and wheat. There is no reason why Southern Rhodesia should not produce maize equal to that of our great corn belt. The grain is grown both by the natives and the whites, and there are two hundred thousand acres planted to it. Some lands yield fifty bushels or more to the acre, although the average is less than that.

Much of the farming is now mixed. The average settler takes up from five hundred to three thousand acres, putting a small amount under cultivation and using the remainder for grazing. The climate is such that the animals can feed out of doors all the year round, ten acres furnishing enough grass for one head.

Here at Salisbury the altitude is about forty-seven hundred feet, and in coming inland from the ocean I have crossed land more than a mile above the sea. Most of Rhodesia is a rolling plateau, and I see no reason why much of it should not some day be covered with the homes of white men. All the land that is three thousand feet above the sea has a climate suitable for Europeans, although it is only at more than four thousand feet that white children enjoy the best of health.

For the size of the country there are comparatively few natives. The total Negro population of Rhodesia is not larger than that of some of our Southern states. The blacks are, as a rule, quiet and easily controlled, and, compared with the Negroes farther south, they are good workers. The average native can live on a few dollars a year. He usually has several cattle and a corn patch. Under company rule each man was taxed one pound or five dollars a year, which included the tax for one wife. If he had more than that he had to pay ten shillings a year for each wife. This did not, however, put a premium on monogamy, for the additional wives more than paid for themselves in the work they did.

As this whole territory is only three or four decades from absolute savagery, I cannot but marvel at the great steps it has taken in the paths of progress. Forty years ago neither life nor property was anywhere safe, and the country was owned by Negro tribes at war with one another. Even in 1896 Rhodes was still fighting the Matabeles, in what is now Southern Rhodesia. To-day good order prevails everywhere, and the natives have become peaceful subjects. The two Rhodesias have twenty-five hundred miles of railroads, and in Southern Rhodesia

alone are more than three thousand miles of wagon roads. All along the railroads have sprung up towns in which are government offices, banks, churches, hotels, schools, and public libraries. There is a fine hospital here at Salisbury and others at Bulawayo, Umtali, Victoria, and Gwelo.

The postal service has extended until it now reaches every part of the country, mails being sent by runners to the borders of Lake Tanganyika. Southern Rhodesia also has postal savings banks, with deposits of more than a half million dollars. Telegraph rates are cheaper here than in the United States, and messages can be sent to all the settled districts. Railroad service is excellent for a new country, and one can travel almost as comfortably as at home.

CHAPTER XIX

BULAWAYO, CHIEF CITY OF RHODESIA

STAND with me in front of the bronze statue of Cecil Rhodes in the public square of Bulawayo and take a look at the chief city of Rhodesia. It has a population of less than ten thousand, but it is the biggest South African settlement north of the Transvaal. It was planned by the explorer, Jameson, an intimate friend of Cecil Rhodes. He made the principal roadways so broad that a bullock cart of sixteen span could turn around in any one of them. Most of the stores are of one or two stories, and the width of the streets makes them look lower. They are built of stone and brick. A few are of granite, but the chief building material is a red sandstone from the quarries near by.

On one side of us is the Grand Hotel, which covers half an acre. A little farther on is the Bulawayo Club, a bungalow-shaped structure of one story with wide verandas about it, where I am staying. Bulawayo is a town of clubs. It has several social and athletic organizations, including a turf club and a gun club, and three Masonic lodges. It has a public library with several thousand volumes, while down the main street is an excellent museum containing exhibits that show the mineral and agricultural resources of the territory, its wild beasts and birds, and the life of the natives. There are seven churches, two theatres, a musical and dramatic society, a chamber of mines, drill halls, and markets. The stores

When Doctor Jameson, the friend of Cecil Rhodes, laid out Bulawayo, he made the main streets broad enough for a bullock cart of sixteen span to turn around in them, but the ox teams are now giving way to the automobile and motor-truck.

Among the Matabele, corn for a whole village is stored in circular mud structures, perched on stones to make them rat proof, and protected from the rains by a roof of sticks and grass thatch.

are large and the windows attractively dressed. There are three large banking corporations, a chamber of commerce, several newspapers, and all the accompaniments of a thriving community.

The assessed value of Bulawayo runs into the millions, and as Rhodesia develops it will eventually be a large city. Aside from the gold mines of the surrounding districts and the fact that there is coal in the neighbourhood, the town stands in the midst of a rich grazing territory. It is also the chief railway centre of Southern Rhodesia. In planning it, abundant room has been allowed for growth; all the land within four miles of the city boundaries has been reserved as a commonage, and cannot be sold as farms. The cricket, bicycle, and football parks are situated in this surrounding area, and also the race track.

It is hard to realize how recently this city was the capital of the Matabele, a once powerful native tribe. I rode out to-day to Government House, which stands on a hill on the very site of the great hut in which lived Lobengula, the notorious tyrant last to rule as a Matabele king. It is reached by a wide drive shaded by trees planted at the direction of Cecil Rhodes. In the grounds is still the very tree under which the savage African king sat upon his biscuit-box throne and issued his decrees of life and death. Near by was a crocodile pool into which he used to throw, tied hand and foot, any of his subjects who had offended him. The man-eating reptiles not only served as executioners, but saved the trouble of burying the victims thus sent to their death.

There are many men living here who knew Lobengula. He was of enormous size, being six feet tall and weighing about three hundred pounds. He was so fat that when he

sat on his biscuit box his flesh hung down in folds over his hips, and when he walked his elephantine frame rolled from side to side. He had bulging, blood-shot eyes and thick lips, and was the personification of cruelty. Stanley describes him as one of the most bloodthirsty of African kings. Frank Thompson of Natal, to whom he sold the mining rights in Mashonaland for five hundred dollars a month, tells the story of his punishment of a native warrior. It was at the time of a great dance, and Lobengula's women were bringing his beer to him when this man snatched one of the gourds and took a sip. The offense was reported to the King and the criminal dragged before him. Lobengula then said:

"That nose of yours is guilty. It smelt the beer. Let it be cut off." And with that the executioner cut off the man's nose.

The King then said: "Those eyes of yours saw the beer. They are guilty. They should be put out." And the executioner did the gouging.

"You have now heard with your ears that it is not allowed to drink the King's beer," continued Lobengula. "Your ears are no longer of any use to you, and they shall be cut off." After this was done the man was beaten within an inch of his life and finally dragged himself away to die.

I understand that Lobengula was particularly fond of beer. He was accustomed to make his white visitors drink with him, everyone who called being expected to take three cans of beer and to eat three plates of grilled beef. The King would not drink champagne, but gave all that was presented to him to his wives, of whom he had a large number. Some of his numerous family still live, and I have a photograph of his favourite daughter. She

measures five feet eleven inches from her bare yellow heels to her shaved black crown, and is fully as robust as the old tyrant was in his prime.

As chief of the Matabele, Lobengula was supposed to own all the country about Bulawayo, which in the Zulu language means "place of slaughter." He had vast herds, controlled the mines, and was the ruler over fierce and warlike tribes. The Matabele got their name, "vanishing men," from their habit of dodging behind their ox-hide shields in battle. Driven out of the Transvaal by the Boers in 1837, they poured into what is now Southern Rhodesia. Their leader at that time was Lobengula's father, Mosilikatze, who gathered up conquered tribes as he came, until he had hordes of well-organized warriors in his train. His name means "pathway of blood," and was most appropriate. He was succeeded by Lobengula, who upheld the traditions of his savage father.

When Lobengula died the natives surrendered to the white man's rule, and since then they have been comparatively quiet, except for one revolt caused by the witch doctors. Lobengula himself claimed to be a witch doctor and said he could make rain. He did this by mixing a kind of devil's broth of crocodile livers, snake skins, frog toes, and hippopotamus fat. As the steam of this concoction rose, he petitioned the gods to open the clouds, and the rain was supposed to fall. Speaking of rain-making reminds me of the story that shortly after the statue of Rhodes was erected in Bulawayo there was a drought, which the natives believed was because Rhodes had no hat on. They said that the spirits would not offend the great man by sending down water on his bare head.

In coming here I travelled for a day with the chief native

commissioner of Rhodesia, a man who has charge of all the Negroes of Mashonaland. He tells me that the Mashonas have trials to detect witches. One of the tests is making the accused lick a red-hot stone. If he is guilty his tongue will blister. If not, he is innocent. Another test is to make a man take certain medicines. If they make him sick or cause his death he is supposed to be a witch. If not, he is allowed to go free. A third test, used especially for thieves, is to drop a stone in a pot of boiling water. The suspect must take this out with his bare hand. If the hand shows no sign of scalding, the man is cleared; if his hand burns he is adjudged guilty and punishment follows. The same test is used in parts of the Congo to determine whether a wife has been unfaithful to her husband.

The natives believe in the justice of all these tests. A white trader of the Zambesi told me that he missed a shirt not long ago and accused his native servant of stealing it. However, when the boy protested his innocence, the trader believed him. But the next day the lad came in with his hand terribly scalded and confessed his guilt. While cooking he had overturned a pot of hot water upon himself, and he superstitiously thought that the burning occurred because of his theft.

One of the punishments decreed by the witch doctors in some regions is to condemn the witch to be eaten by ants. The convicted man is taken out into the wilds, smeared with honey, and tied to a tree. The honey attracts the ants, which complete their work by biting the flesh from the bones. Another punishment is to lay red-hot stones on the bare stomach of the accused, while among some of the tribes instances are known in which supposed witches have been roasted over slow fires.

The witch doctors are by far the most important members of these African tribes. They are thought to be divinely appointed and especially authorized to use magic for the good of their people. Each one has to undergo a course of training before he can practise. He must also exhibit certain idiosyncrasies that prove him fitted for his job, such as falling into trances and communicating with spirits. He must handle poisonous snakes. He must be a sleight-of-hand performer and able to make the people believe he has miraculous powers. As a rule, he kills more than he cures, but this does not seem to affect his reputation. The witch doctor has a special headdress of fur and feathers, and wears charms of many kinds about his neck.

The government has white officers who look after the interests of the natives. I talked with one man who has been managing the Negroes for many years. He tells me that the whites are now respected and that the natives are better off than they were in the days of Lobengula. So far, comparatively little of this country has been taken up by white settlers, so that the blacks plant their corn and graze their cattle almost where they please. They live in little kraals or villages ranging in size from twenty to one hundred huts each, while their cornfields are scattered over the surrounding country. They gather their crops at harvest time, storing them in granaries made of mud and thatched with straw. Such a granary is about as big around as a hogshead and four or five feet high. It is raised upon stones and is entered by a hole near the roof, the hole being stopped up when the corn is put in, and opened from time to time as the grain is needed. To aid in keeping out the damp and vermin such granaries

are built on a foundation of stones, and sometimes are perched on the tops of high rocks.

The native commissioner tells me that marriage among these Negroes, as with most Africans, is largely a matter of bargain and sale. The groom pays the bride's father a certain sum for his daughter, the usual price for a strong and good-looking girl being four cows. If she is the daughter of a chief she may bring as much as five or six. Formerly girls were often betrothed when they were babies, the grooms paying a part of the purchase price at that time and the rest by instalments. In such cases the fathers agreed to rear the girls. This practice has been stopped by the government, as it resulted in many an old man possessing several very young wives. Furthermore, by the time the girls were ready to be wedded they frequently fell in love with young men. Now a girl must be of a certain age before she can be sold. In some tribes she is married at thirteen, while in others she must be seventeen. I suppose that fourteen or fifteen might be put as the average age of marriage among the Matabele girls.

The native women are gradually acquiring more rights under the rule of the white man. In the past they had practically none, but to-day the government grants divorces on the ground of infidelity and cruelty. Indeed, divorces are frequent among the various tribes of South Africa. In some a woman can be divorced if she takes milk out of the family supply without asking her husband, while infidelity is punished by death. In that case the husband can demand from his wife's parents as many cattle as he paid for her, or he can claim all the children as his possession. As a rule, most of the natives think quite as much of their cattle as of their wives.

CHAPTER XX

AT THE TOMB OF THE EMPIRE BUILDER

I HAVE just returned from a motor trip across Matabeleland to the grave of Cecil Rhodes in the Matopo Hills. Sometimes splattering over the veldt on roads so muddy that the wheels often spun around without moving the car, we now dashed through streams where the water splashed high into the air, and now crossed ditches and gullies where the machine went up and down in great jumps that tossed me up out of my seat. At times we went honking by swamps, frightening the great black and white herons in their haunts, and later raced with the antelopes over the plains. Every time we passed a Matabele kraal the half-naked natives came out and gazed at us in wonder.

On my way to the Matapos, I rode for thirty miles through a fertile valley, and crossed the government experimental farm that once belonged to the Rhodes estate. Much of the country is but little different from what it was when David Livingstone first told the world of its existence. The veldt stretches on and on to the horizon. Most of it is covered with grass as green as that about Lake Victoria, and it is spotted here and there with a scanty growth of thorny bushes. Along the road are native villages and farms planted to millet and Indian corn. Some are no bigger than a tablecloth, and the largest contain only four or five acres. Rhodes gave directions that

the natives should have the free use of any of his idle lands, and the blacks pay no more rent now than when the whole country belonged to them.

In nearly every corn patch were Matabele women, who do most of the hard labour here. I saw many girls hoeing corn; they were naked to the waist and the drops of sweat glistened on their skins as they bent low to crop out the weeds. There were men in some of the fields, but most of them were smoking and keeping the women from loafing on the job. Many of them have two or three wives, and there are some matrimonial magnates with twenty or so. A few of these lords of creation were clad in cast-off European clothing, but some were entirely nude save for a little apron, not much larger than a lady's handkerchief, tied around the waist. These aprons are made of deer or calfskin with the hair on, and are considered quite ornamental.

I stopped now and then to visit a native village. There are thousands of them in South Africa, all more or less alike. Each consists of a dozen or so huts surrounded by a wall made of tree branches tied together and in appearance not unlike an old-fashioned stump fence. Inside is another wall enclosing a space where the sheep and goats are kept at night, and between the two are the homes of the people. These are circular mud huts, with walls about five feet high, and thatched roofs sloping upward like a cone. Few of them are more than ten feet in diameter, and some are much less. The only opening in the walls of the average home is a door at the front. Entering one, I found the floor smoothly plastered with mud except at the centre, where a hole as big as a peck measure was cut out for the fire. The cooking is all done

Although a wife may cost the native as much as five or six cows, he considers his bargain a good one, as the Matabele women do all the hard work, both at home and in the fields.

Some of the Matabele wear strange assortments of cast-off European clothing, but Mr. Carpenter found others whose sole garment was an apron of deer or calfskin little larger than a lady's handkerchief.

Still too young to assert his independence and dislike of work, this young Matabele boy looks with envy upon his father, who has several wives to relieve him of all forms of domestic labour.

over that hole, the clay pots resting upon the coals inside it. In a few huts iron kettles are used, but the most common utensils are the rude jars of clay made by the natives. In one hut I saw green corn boiling, and in another a half-naked woman was roasting locusts, while the members of her family squatted about and smacked their lips in anticipation of the feast.

One of the villages we visited was that of Oom Jaahn, a famous native chief who led in the rebellion that resulted in the loss of Matabeleland to the natives. To the day of his death Oom Jaahn stood in great awe of the man who had conquered him. Indeed, he was so afraid of Rhodes's ghost that he would not go to his grave for fear the spirit of the great empire builder might be hovering about it. The manager of the Rhodes estate once told Oom Jaahn that he would give him a horse and a new saddle and bridle if the old chief would travel over the twenty miles between this village and the Matopo Hills and have a look at the Rhodes monument. The native replied that he did not want Cecil Rhodes to haunt him for the rest of his life, and that he believed it was best to let dead men lie.

With all his superstitions, Oom Jaahn was a brave warrior, and during his prime was much feared. He fought until conquered, but afterward he gradually came to respect the English soldiers and lived on good terms with the white men. Once, when asked what he thought of Cecil Rhodes and his troops, he replied: "Those men were men." He stopped a moment and then proceeded: "Those men were men of men. And," he concluded, "their fathers and grandfathers were men before them."

It was when we had motored about nineteen miles from

Bulawayo that I found myself in the heart of a big farm established by Cecil Rhodes. He bought up nearly all the land between Bulawayo and the Matopo Hills, including a strip of rich valleys about thirty miles long. To irrigate a part of this tract he built a dam with a capacity of nearly a million gallons of water. Hundreds of acres of this land are now planted to crops of various kinds, and there are tens of thousands of acres of pasture. A part of the farm is devoted to ostriches, a part to cattle, and other parts to game. There are even wild ostriches on the property, but, by Rhodes's decrees, no shooting is allowed in any part of it.

This farm was one of the favourite homes of the great white African king. Although worth millions of dollars, Rhodes was fond of the simple life and liked to be alone. One of his residences was Government House at Bulawayo, which had every comfort that money could buy, but he liked a native hut much better. He had such a hut outside Government House and often left the latter to sleep under the thatch.

Out here on the farm he had three huts in which he spent weeks and months at a time. One was his bedroom, another his kitchen, and the third might be called his drawing room. All these huts are still standing. The drawing room, which is open on all sides, consists of merely a thatched roof upheld by posts and covering a space about forty feet square. The walls are screens of matting that may be rolled up and down at will. When Rhodes was here, they were usually up and as the huts stand upon a hill he had a magnificent view in all directions. Below is an orchard of peaches, pears, apples, and apricots, now in bearing, which was set out under his in-

structions. At one side he could look over the rich valley and at the other see the mighty Matopo Hills, among which he loved to roam. He liked to go off and spend days by himself in the hills, taking his books along and camping out. Once he lost his way and wandered about until he was found by a native. The Matabeles told him that the hill on which he was lost was known among the tribe as the "mountain of the friendly spirit." It was this hill that he selected as his final resting place.

Whenever Rhodes was at the farm, his visitors had to drive nineteen miles to see him. If they wanted to stay overnight they had to sleep in the open, for the huts had no extra sleeping accommodations. Later he built a hotel about three miles distant in order that he might have a place to entertain such guests as he chose. This hotel is now used by visitors as a lunching place on their way to his grave.

Leaving the farm, I passed through the great park and gardens left by Rhodes in his will as a resort for the people of Bulawayo. The park covers eighteen thousand acres, and there are many miles of roads through it, all lined with avenues of trees. More than thirty thousand specimens of plants are cultivated here, and in a large nursery are many forest trees and shrubs. The zoölogical garden includes every kind of animal known to live in Africa, with the exception of beasts of prey such as lions and leopards. There are giraffes, antelopes, elands, and zebras feeding at large all about. The animals are not afraid, for no shooting is allowed in the vicinity, and they are permitted to live, as far as possible, as undisturbed as if they were in their native wilds.

The hills that Cecil Rhodes chose as his last resting

place are like no other mountains I have seen elsewhere on earth. They rise straight from the African veldt in great masses of granite that has been ground smooth by the glaciers of a million or so years ago. Sixty miles long and from ten to twenty miles wide, the great hills wind their way in and out over the plain, looking as though they might have been thrown up by volcanoes. In some places they remind me of the Garden of the Gods on the edge of the Rockies in Colorado, because of the many great boulders piled one upon another. And such boulders! They are as round and smooth as the stones on a white pebble beach, and hundreds of them are as large as a haystack. The granite rocks upon which they lie are smooth, too, like so many great wens on the bald head of old Mother Earth.

Indeed, the whole range is one mighty glacial garden. The hills are scarred and worn. Often the rocks are piled up like a fortification, as evenly laid as though the gods had been masons working here at their trade. Some of the rocks are beautifully coloured, and their hues change as the sun strikes them from different angles. Between the hills lie beautiful valleys. Cascades flow down their slopes, fed by springs that gush forth here and there on the hillsides, reminding me of the living water that spouted when Moses smote the rock.

The Matopo Hills are the scene of one of the bravest acts of Rhodes's adventurous life. During Doctor Jameson's famous raid against the Boers in 1896, Rhodesia was left defenseless and the Matabele seized the occasion to rebel. They had been restless and discontented ever since the revolt of 1893, and their grievances were aggravated by the administration's action as to rinderpest, the cattle

Farms of three thousand acres are not uncommon in Rhodesia, where the wealthier landowners live in comfortable, modernly equipped homes that compare favourably with the finest farm residences of the United States.

Carved out of the solid granite at the summit of the Matopo Hills and guarded by the great boulders placed here by Nature, the tomb of Cecil John Rhodes overlooks vast stretches of the land added to the British crown by the great empire builder.

disease. In order to check the advance of the pest, which had suddenly come down out of the north, the British South Africa Company established a clear belt by killing all the cattle in a prescribed area. The Matabele did not understand this and thought it an outrage against their property. Furthermore, many of the natives died from eating the flesh of diseased cows. They blamed their white rulers for these deaths, and so, at the first opportunity, they took to arms.

The natives finally retreated to the fastnesses of the Matopos, where they hid in the caves and could not be driven out. Hurrying to the scene of action with three unarmed companies, Rhodes set up his camp in the wilds and opened negotiations with the sullen warriors. The British soldiers were stationed near by, but he refused a guard. At length, after two months of parleys, the strife was so satisfactorily settled that the Matabele have been peaceful farmers and herdsmen ever since. On the wall of Rhodes's bedroom at Groote Schuur, his home near Cape Town, one may still see the photograph of the shriveled old Matabele woman who acted as negotiator between Rhodes and the rebels. He never forgot the service she rendered.

Reaching the foot of the hills, we wound our way among the boulders to the foot of the rocky mass where Rhodes chose to rest. It is more than a mile long and rises hundreds of feet above the valley. Like all the Matopo Hills, it is composed of red granite, ground as smooth as a polished tombstone. I climbed up with the aid of my staff, sometimes bending half double and setting my feet flat for fear I might slip. The view broadened at every step, until at last, on the top, I could see the Matopo Hills ex-

tending on each side of me to the horizon. Before me lay the panorama known as "World's View."

On the top of the hill the smooth rock forms a level space that covers perhaps a quarter of an acre. About it lie a score of the great boulders I have described, so placed by Nature that they seem to guard it. In the centre of this space, on the very summit of the hill, is the tomb of Rhodes. His grave was gouged out of the solid rock with mallet and chisel, the granite being so hard that it took the masons ten days to do the work. They did not dare resort to blasting, for fear that it might crack the rock. After the coffin was placed in this rock sepulchre, it was covered with cement and a granite slab placed over it, the whole being hermetically sealed. On the top of the slab there is now a bronze plate three feet wide and five feet long, upon which are engraved the simple words that Rhodes ordered. They are

Here lie the remains of Cecil John Rhodes.

There is no date of birth or death, and no inscription describing the wonderful work that Rhodes did for South Africa and Great Britain. Nearly all his life had been spent in acquiring and building up new territory for the Empire, and his last words before he died in 1902 were, "So little done—so much to do." Even then his work had not ceased, as he left almost his entire fortune as a fund to provide scholarships at Oxford for Anglo-Saxon students, saying that "educational relations between different nations form the strongest tie for world peace."

As I climbed up the rocks, I was followed by Matabele boys, two of whom are always on watch at Rhodes's grave. Guards were first placed here by old Oom Jaahn,

the chief whom I have mentioned. At first Oom Jaahn furnished the boys free of charge as a tribute to the memory of Rhodes, in accordance with the Matabele custom of guarding their noted dead. After a while, however, the Rhodes estate recognized their value as a protection against souvenir fiends and any others who might deface the tomb, and since then the watchers have been paid. They say nothing to visitors, but any man who would dare to cut his name in the rocks or to chip off a bit of granite would at once be reported to the authorities at Bulawayo and punished.

Near Rhodes is buried the body of Doctor Jameson, and not far away is a granite monument to a group of Rhodesian pioneers who lost their lives in the rebellion of 1893. In a near-by cave is the grave of Mosilikatze, the Matabele "pathway of blood," and in another cave are some ancient Bushmen paintings.

The very simplicity of Rhodes's monument, in the wilds of the vast country that he gave to the English crown, adds to its grandeur. The whole scene is so impressive that as I stood there the words of Kipling came to my mind:

> It is his will that he look forth
> Across the world he won—
> The granite of the ancient North—
> Great spaces washed with sun.

CHAPTER XXI

KING SOLOMON'S MINES

DID the gold of King Solomon's temple come from Rhodesia? Some noted archaeologists claim that it did. There are mighty ruins here in Matabeleland that are said to have belonged to the miners of Biblical times, and in Mashonaland are the ruins of Zimbabwe, which may have been built by the very men who dug out that gold. All over Matabeleland and Mashonaland are the remains of ancient workings.

When Vasco da Gama first made his way around the Cape of Good Hope, he found that the natives of Sofala, a port in what is now Mozambique, had gold that came from the Northwest, and probably from Rhodesia. We know that gold was being taken out of Africa hundreds of years before that time, and it is said that much of the treasure of the ancient Romans was from this region. For years the Arabs controlled a large part of the East African coast, and it was from them that the Egyptians obtained much of their gold. Some of the ruins here resemble those of the Sabaeans, an old Arab race, and it is thought that they may have been built by Sabaean miners in the days of King Solomon. The records of history as far back as one hundred and twenty years before Christ refer to the wealth of the Sabaeans, and there is an Assyrian inscription, dated B. C. 733, that speaks of Arabia as

The Rhodes Memorial near Cape Town contains only a bust of the great empire builder, with the inscription: "To the spirit and life work of Cecil John Rhodes, who loved and served South Africa."

Every premier of the Union of South Africa has his official residence in Cape Town at Groote Schuur, the former home of Cecil Rhodes, who in his will gave the magnificent property for this purpose.

One of Rhodes' favourite spots was the rear porch of Groote Schuur, which overlooked the trees and hydrangea beds of his garden and afforded a view of Table Mountain in the distance.

furnishing a rich tribute of gold, silver, and incense. Since Arabia contains practically no gold itself, its treasure must have come from other countries, and, presumably, from Africa.

When I was in Egypt a few months ago I visited the great temple of Dahr-el-Bahari, in the desert near the site of ancient Thebes. On the walls of that temple are pictures showing how, about seventeen hundred years before Christ, the land of Punt was conquered by the Egyptians, and how they brought back ebony, ostrich feathers, and the skins of leopards, lions, and giraffes, as well as elephants' tusks and ingots of gold. All these things are found in Rhodesia, which may have been the land of Punt and the place to which the Egyptians made an expedition. It is also said to have been the land of Ophir, to which King Solomon and Hiram of Tyre sent out parties that brought back gold.

About fourteen miles from Bulawayo, and within easy reach by horseback, bicycle, or automobile, are the ruins of Khami. They are on the edge of a river and are surrounded by hills in which are troops of baboons, while near by may be found antelopes, lemurs, and squirrels. The ruins show the remains of the walls of ancient buildings of granite blocks, some of which are laid together in a checkerboard pattern. The houses of these ancients were circular, and seem to have been built of a granite cement hardened by burning. Between Bulawayo and Gwelo are the remains of other circular buildings.

The great Zimbabwe ruins lie about a hundred miles from Salisbury and between two hundred and three hundred miles from Bulawayo. They are on the high plateau of Mashonaland, about two thirds of a mile above the sea,

and are connected with other ruins that extend along the entire length of the western bank of the Sabi River. Most of them are within a short distance of quartz reefs, or ridges, containing gold. To guard their treasure, the early gold seekers and traders are supposed to have maintained a regular system of strongholds and outposts all the way down to the coast. Judging from the strength of the position and the large area enclosed, it seems probable that Great Zimbabwe was their chief inland stronghold. The remains of a great temple, two hundred and eighty feet long, are still standing. At one point the wall is thirty-five feet high and sixteen feet thick at the base. It is made of small blocks of granite fitted so closely that there is practically no vegetation upon the ruins. The wall was made without mortar or cement, although the floor is covered with a cement of powdered granite. In the enclosure are three round towers that seem to have been erected as monuments. They are of solid stone, and the largest one is thirty-five feet high. The remainder of the circular building is divided into smaller enclosures. Some scientists say that the whole bears evidence of having been used by people like the Phoenicians.

South of the temple are steps that led to gold-smelting furnaces and caves; the ancient crucibles found in them are now in the museum at Bulawayo. Some still have gold in them, and there are other relics that show the old methods of working the mines and treating the ore. From the same ruins came also sheets of fine gold, links of gold wire no thicker than a thread, and an ingot of solid gold about an inch long and a fourth of an inch thick. The ingot seems to have been a piece of the money of that age. There are also copper chains, beautifully made, and

ingots of tin, although so far no tin deposits have been discovered near by.

Not far from Great Zimbabwe have been found the ruins of another temple, although little more than the cement floor remained when the first excavations were made. In the centre of the floor was an altar of small granite blocks, and under the altar were found the remains of the symbols of Phallic worship and fragments of soapstone bowls. Near it was a gold smelting furnace. The fact that the natives regarded the ruins with superstitious awe would seem to indicate that their builders were foreigners.

There is no doubt that there is a vast amount of gold in Rhodesia, besides other mineral deposits, including copper and chrome iron. Rhodesia has diamond mines that have already produced thousands of carats of precious stones, and coal mines that have yielded five hundred thousand tons in a year. The chief mineral value of the country, however, is in its low-grade gold deposits, which are worked in hundreds of small claims. The annual output of ore has reached a value of more than fifteen million dollars, and something like two hundred and fifty million dollars' worth has been mined since the country was opened up. These mines are far north of and entirely apart from the great mines of the Transvaal, where the workings are on a gigantic scale.

Indeed, many of the gold mines in operation to-day consist chiefly of deepening the excavations of the past. The former diggings were usually abandoned when they had reached a depth of only from forty to a hundred feet. The ancients had crude ways of reducing the ore, and some of the waste on the old dumps has been worked over

again. I am told that nearly all the old reefs, as they are called, grow better as they go downward. Although they contain low-grade ore, it is such that it can be worked with small stamping mills. I have seen mills with only three stamps each, while there are many that are worked by a couple of white men and a dozen or more natives.

In Rhodesia's gold fields one can seek in vain for the license and the wildness of our own lawless California mining towns of '49, or the reckless disregard of life and property in the Klondike gold rush fifty years later. Hundreds of thousands of natives are kept in bounds by a comparatively few soldiers, and peace and order prevail everywhere.

The government police patrol the country just as do the mounted police of northwestern Canada, and the white settlers living away off in the wilds need have no fear. The other day I met a captain of the mounted police of Mashonaland, who with seventy men keeps in order a territory as large as Illinois. They ride on horseback from farm to farm and bring back reports as to the condition of the territory. Every European settler must be visited at least once a month, and the policeman has to get from each a written report as to the condition of the country about him.

"Rhodesia is practically as safe as England," said this officer to me. "If it were not for the lions and leopards, a man might go all over it without a gun. The natives are quiet, and our white settlers are a great deal better off than those of the ordinary frontier. As the settlements increase, the conditions grow better and better."

CHAPTER XXII

AFRICA'S NIAGARA

ONE OF the grandest natural wonders of old Mother Earth is out here in Africa. It is the falls of the mighty Zambesi, one of the great rivers of the globe. It has been compared to Niagara, though I find it almost impossible to liken one to the other. Each is beautiful beyond description, but as a raging convulsion of Nature, I should call Victoria Falls by far the more wonderful. The two may be compared to a play. Niagara is a drama of but one act. Victoria has many acts, each of which has several scenes.

The falls of Niagara surpass the Victoria Falls of the Zambesi in volume, for over them pours the water-shed of half a continent. The great basin of Lake Superior is six hundred feet above the Atlantic, and almost one third of its drop is at Niagara. The Zambesi has its source in a swamp a mile above the sea, and its waters have fallen two thousand feet in their course of eight hundred miles before they make their mighty leap into this basaltic gorge.

The Victoria Falls are twice as broad and more than twice as high as Niagara. The river is two miles wide above the falls, and it narrows to a mile where it plunges straight down over the cliffs into a gorge more than four hundred feet deep. I could hear the thunder of its waters when ten miles away, and the spray that rises up in five great columns known as the "Five Fingers" can be seen

fifty miles away. The natives call the falls "Thundering Smoke," and from time immemorial the atmosphere of mystery and superstition has hung over them. When Livingstone wanted guides to help him explore them, he could hardly induce any of the blacks to go along. The natives believed the region to be the home of terrible demons and monsters of destruction. The Arab name for the place was *Musa-i-nunya,* or "the end of the world."

Victoria Falls is in the heart of the wilderness. The only signs of civilization in the vicinity are a hotel, the railroad station, a post office, and a few bungalows. All the rest is forest filled with wild game. There are birds of strange plumage in the trees, and the great river itself is the home of many hippopotami. Standing upon the porch of the hotel near the falls, one looks for miles over land densely wooded. With a powerful glass he can see nothing but this vast expanse of green, broken only by the windings of the gorge at his feet and by the five pillars of mist that rise like the vapour from volcanoes until lost in the low-hanging clouds.

All the land within a radius of five miles of the falls has been set aside as a public park, which is to be left as Nature made it. Outside that radius is a reserve stretching for fifteen miles along one side of the river, and on the other side is a block of forest fifty miles square. No shooting is permitted in the woods, and no one is allowed to build so much as a farmhouse or any other structure that might detract from the natural beauty of the scene.

Notwithstanding all this, the Victoria Falls may be visited with almost as much comfort as Niagara. There are now trains de luxe, with dining cars, observation cars, and bathing accommodations, to bring one from Cape

Town or Beira, while the hotel here would not be out of place in southern California. I have a suite of four rooms, including parlour, dressing room, bedroom, and bathroom. My apartment is lighted by electricity and cooled by an electric fan. The parlour has luxurious furniture and rugs, and even boasts a piano. The rate I pay for myself and my son is not extravagant, considering that we are off in the jungle. Besides our usual three meals every day, we have a cup of coffee on rising and afternoon tea. Our table waiters are natives in uniform, and our chambermen are black boys in white gowns.

But come with me and take a look at the falls. We shall first stroll down to the bridge that crosses the gorge through which the mighty river flows after it leaves the falls. You have probably heard of this bridge, which is one of the highest in the world. It was made in England and brought out here in sections. Although seven hundred white men and two thousand natives were employed in erecting it, so carefully was the work done that it cost the lives of only one European and one native. It is four hundred feet above the water and has a span of five hundred and fifty feet. It is so close to the falls that drops of spray fall upon the trains as they pass, and travellers have a glimpse of the cataract from the car windows. This is due entirely to Cecil Rhodes, who, in spite of his engineers' statement that the bridge could not be built so near the falls, insisted upon its being located where he wanted it.

As we stand upon the bridge, a tower of green rocks rises before us, bisecting the narrow gorge, and the whole flood of the Zambesi boils and seethes below. The yellow waters look like a vat of steaming molasses. Opposite

the tower is another mass of green, far down in a second gorge. It contains palms, date trees, tree ferns, baobabs, and a jungle of smaller vegetation. It is known as the palm *kloof*, and is a great botanical garden kept only by Nature, and inhabited by monkeys and baboons.

Leaving the bridge, we take our first view of the cataract from its eastern end. The way is along green paths, under green trees, where the ground is so level that we cannot see the falls until we are close to them. The huge torrent bursts upon our vision all at once. It dashes over the rocks with a roar like a cannonade of artillery. The mist is so dense that we can see only a third of the distance across.

The sun is shining through the spray and there are rainbows above and below us, and in the great gorge itself. One a thousand feet long has stretched itself from wall to wall about three hundred feet under where we are standing. Its colours are more gorgeous than those of any rainbow I have ever seen. A child stood here the other day and asked her father why men did not lower themselves over the rocks by ropes and get the great bags of gold that the fairies say are always hidden at the ends of the rainbow.

Our next trip is to the Devil's Cascade, on the other end of the falls. To reach it, we must cross the bridge and walk through the park for about two miles. As we proceed, we frighten the monkeys, and strange birds fly about our heads. A thick mist is falling, and again we cannot see the cataract until we are right upon it. We sit down opposite the lip of the falls and watch the mighty waters pouring over the black rocks in volumes of yellow foam. The Zambesi is now muddy, because the river is in flood.

At Victoria Falls the Zambesi plunges downward more than twice as far as Niagara, sending up clouds of spray that keep the surrounding forests always dripping and cause the natives to call the great cataract "Thundering Smoke."

At the insistence of Cecil Rhodes, the bridge over the gorge of the Zambesi was built so close to Victoria falls that passengers on the Cape-to-Cairo Railway often can feel the spray from them.

In front of us is the great pit into which it falls, a vast cavern hundreds of feet deep. We cannot see its bottom, for out of it is rising such a volume of mist as exists nowhere else in the world. The western end of the falls is cut off from the main portion by Cataract Island, which lies several hundred feet out in the river. This western cataract alone is greater than any fall in Switzerland. It is only a little section of the Zambesi, but if it could be carried to the Alps it would be one of the wonders of Europe that tourists would travel thousands of miles to see.

The most remarkable view of Victoria Falls is from Livingstone Island, which divides the Zambesi in its centre. It is on the very edge of the falls, and when the river is high there is hardly a perceptible mark of division, the great cascade seemingly going down in one mighty sheet.

The island can be reached without danger only when the river is low. The water is now much too high for safety, but I was not aware of this at the time or I should not have thought of making the trip which I shall now describe.

Above the falls the Zambesi is two miles wide and full of green islands covered with a dense growth of papyrus and small trees. The banks are low, and as we made our way up the river we saw the spoor of many hippopotami. We did not attempt to embark in our canoe until we were perhaps a mile above the falls. Where we started, the water was quiet. For canoemen we had four half-naked blacks with bracelets on their arms and bands of wire tied around their legs between the knee and the calf. As we made our way out into the stream, we could see little droves of hippopotami swimming about. They looked

so much like the rocks that only when they raised their black heads did we know what they were. Our boatmen were afraid of them, so we paddled off to one side. We went by one beast that threw its head high into the air and opened its mouth almost in our faces. It looked as though a side of beef had been split in half. The teeth were as big around as my wrist, and I could see the great white tusks embedded in the red jaws.

When we reached the middle of the river the canoemen stopped paddling. Our speed increased in the swift current and we had trouble making our way among the rocks. We soon came into the line of the spray, which fell like rain. The thunder of the waters was now so great that we had to yell to make ourselves heard. We seemed to be rushing right into the Devil's Cascade. After a number of narrow escapes, we fought our way out of the current and came to the black rocks of Livingstone Island. Here we fastened the boat and waded through the woods and across the pools to the knife edge of rock over which the Zambesi pours in its mighty plunge.

If you could double the height and width of Niagara, and then imagine yourself standing in its centre upon a space barely wide enough for your feet, with the raging cataract on each side, you might realize my position as I stood there. I was on a little section of bare black rock in the midst of the great torrent. All around, above and below me, was a fog so thick that I could see beyond it only when it was parted by the wind. There were times when I could not see ten feet in front of me. Then the mist would break, and I looked down into a bottomless pit filled with clouds that rose for a half mile up into the sky.

The mist dropped as a warm rain that, notwithstanding my rubber coat, drenched me to the skin. I tried to take notes, but the water obliterated the pencil marks as fast as I made them. I shut my memorandum book and put it into the pocket of my waterproof. When I took it out it was almost a pulp. The water had filled the pockets and I carried a quart or so with me back to the land.

Holding tight to the rocks, I picked my way along the edge of the falls as far as I could, looking down into the gorge now and then as the wind blew away the mist. I was peeping into an inferno, a roaring, foaming, raging hell that needed only brimstone and flame to fit it for the devil and the damned. I did not dare look long for fear a sudden desire might cause me to jump into the boiling mass—down, down, down, into that wide gorge up which the winds were hurling those clouds of spray.

It was from this island, which the natives called Kempongo, that David Livingstone had his first view of the cataract in 1855. He reached it in a canoe from the upper Zambesi. Noticing how many trees grew there in the rich soil kept continually moist by the spray from the falls, he christened it Garden Island and tried an orchard experiment. He planted, he says in his own account, "about a hundred peach and apricot stones and a quantity of coffee seeds. When the garden was prepared," he goes on, "I cut my initials on a tree, and the date 1855. That was the only instance in which I indulged in this piece of vanity."

To-day the Name Tree is still pointed out, although the initials and date are not really legible. There is little doubt as to the identity of the tree, however, as it was in-

dicated years afterward by an old native who knew Livingstone and saw him cut the initials there. It has had to be surrounded by a guard to keep off tourists, by no means so modest as Livingstone, who not only wished to cut their initials in its trunk, but had begun to strip off and carry away pieces of its bark. There are no traces now of the garden, which Livingstone had hoped might prove the "parent of all the gardens that may yet be in this new country." Probably, as he feared, it was destroyed by the hippopotami.

While returning to the mainland, we several times narrowly escaped going over the falls. To keep us out of the current, the Negro boys who paddled us had to get out several times and lift the canoe through shallow places in the rapids. By wading and pushing, paddling and fighting the rocks, we at last got into smooth water, and, tired out, came back to the banks whence we had started. Although I consider the excursion one of the greatest experiences of my life, I feel much like the Texas father who, having just been blessed with his eleventh child, said:

"I would not take a million dollars for this one, but I would not give a nickel for another."

After exploring the great rocks lying in front of the falls, we walked through the Rain Forest, which the natives call "the place where the rain is born." It is a jungle of woods where day in and day out, for the greater part of the year, the leaves always drip. It is wet by the spray from the falls, and one cannot keep dry in it without rubber clothing. Whenever the wind blew, the drops became a shower. The vegetation was dense, but at the breaks in the woods the sun found its way in and turned the spray to a veil of fine lace. The raindrops on the

Besides coal mines that have yielded a half million tons a year, Rhodesia has large deposits of gold, copper, iron, and diamonds. The chief mineral wealth of the country is in its low-grade gold mines.

The automobile, which has made its way into practically every part of South Africa, is a great boon to prospectors looking for mineral outcroppings. Practically all the cars imported are from the United States.

leaves sparkled like jewels, and here and there were little rainbows extending from one tree to another.

In summer the forest is filled with flowers heavy with perfumes and rich in colour. There are yellow gladioli with blossoms so shaped that the spray cannot get inside them, tree orchids that seem almost to float from the branches, and great masses of pink and yellow and purple and crimson flowers that would make a botanist rave with delight. In this region, too, one may see the Musungula tree with its large brown and gold blooms. The bird that feeds on the insects in these flowers has wings that match the petals. In winter the great seed pods are sometimes four feet long. They are shaped like clubs and are so heavy that the natives are afraid to sleep under the tree for fear of being killed by falling pods.

Hundreds of thousands of horse-power are going to waste in the Victoria Falls every day, and the time is probably not far distant when this energy will be caught in hydro-electric plants and put to work. The flow of water over the falls is not the same the year round, and the available energy has been estimated at from three hundred thousand to six hundred thousand horse-power, depending upon the season. In addition to the four-hundred-foot drop at the falls, there is another drop of seven hundred feet in the first fifteen miles of the gorges below. How soon this vast water-power will be developed depends largely upon the need for power in this region. The Victoria Falls and Transvaal Power Company, which is supplying the present demand for both electricity and the compressed air used in mining, will undoubtedly put to work the mighty power of the Zambesi as soon as conditions make it profitable.

CHAPTER XXIII

ON THE CAPE-TO-CAIRO ROUTE

I HAVE come from Victoria Falls over part of the Cape-to-Cairo route to Broken Hill, three hundred and eighty miles above the Zambesi River. I am as far from the Cape of Good Hope as the distance from Boston to Denver, and farther north of the southernmost point of Africa than Hudson Bay is north of the Gulf of Mexico. The land here is healthful, lying at a greater height above sea level than the average altitude of the tops of the Alleghany Mountains. It is a great plain covered with grass that reaches far above one's head, and spotted with patches of forest and clumps of brush. The woods are not dense nor are the trees large, but they are the haunts of many wild animals. The country seems rich, and is being gradually taken up by farmers and stock raisers.

Broken Hill itself is a zinc and lead mining town. White men live quite comfortably here in the midst of the African wilds, only a half day's ride from regions teeming with all kinds of big game. They occupy comfortable bungalows built of brick and surrounded by gardens, or native huts made of the branches of trees chinked with clay and thatched with straw. The bungalows have roofs of galvanized iron, which make them hot at midday, and I understand that the native huts are more

comfortable. Their roofs are cone-shaped and so thick that the sun cannot penetrate them. They rise fifteen feet above the walls and extend out over them so that there is no danger of the rain getting in. Many of these homes are equipped with hammocks, beds, and easy chairs, and separate huts, built close by, are used as kitchens and as servants' quarters.

The Broken Hill hotel is a collection of thatched huts, all made of red clay from ant hills. The largest hut, which is the dining room, is about twenty feet square. The waiters are half-naked Negroes who trot about in their bare feet. Another hut serves as the kitchen, and every guest has his own individual hut as a bedroom. They have grass roofs, and the windows are holes in the walls covered with mosquito nets.

The hotel is almost in the jungle, and although the spaces between the huts are clear, the grass behind is as high as a man's head, making it easy for a leopard or a lion to crawl up and carry off a baby. Indeed, the mothers must watch their children carefully, and the little ones never play out of doors after dark. As I walked through the hotel grounds I saw a baby carriage at the door of one of the huts, while a rosy-cheeked little boy of three tagged at my heels. Broken Hill has football and cricket grounds and a tennis court. Though far off in the wilds, it has its afternoon teas and other social affairs.

I have spent some time going about among the native miners, hundreds of whom work under white foremen. They are Bantu Negroes from the tribes of the vicinity, and are small in stature. Some distance from the European quarter they have a village of their own consisting of a hundred or so clay huts surrounding a court of five

acres. Each hut accommodates five or six natives, and not a few of them have their wives with them. Their food is corn meal, each man being allowed three pounds a day. The meal is made from Kaffir corn and is ground at the mines by a portable engine.

The dozen or so business establishments of Broken Hill are in sheds of galvanized iron, or huts of ant-hill clay with thatched roofs. Every shop sells a variety of goods. The shelves are full of canned stuffs from Europe and the United States. There are hams, tongue, and canned beef from Chicago, Kansas City, and Omaha, canned fruits from California, and salmon from Oregon and Alaska. Most of the hardware and tinware comes from Europe, as well as the jams and the jellies. The storekeepers are Englishmen, and the clerks are native blacks. All the prices are high.

The Broken Hill post office is a sheet-iron shed about fifteen feet wide and thirty feet long. It is the residence of the postmaster. Mail for a large area is brought here by train and after it has been sorted it is carried by scores of native runners to all parts of the territory west of Broken Hill. At each of the far-away places are branch routes radiating in different directions, so that almost every settler and miner has his mail regularly. Although there are hundreds of runners carrying mail to the remote districts, only a few have failed to make good.

While at the post office I sent a letter to the United States. The postage was eight cents and my letter will be more than a month on the way. A telegram that I sent to Livingstone, the capital of Northern Rhodesia, three hundred and eighty miles distant, cost me no more than a message going an equal distance in our own country.

Rhodes' dream of a steam route from Cairo to the Cape is now almost a reality, and except for a few stretches over which one must motor or "trek," the entire journey from the Mediterranean to the southern tip of the continent can be made by train or steamer.

A wooden railway tie in Rhodesia would be consumed by white ants, which have made it necessary to use steel ties all the way from the Zambesi north to the end of the line at Bukama.

There are now eight thousand miles of telegraph lines in Rhodesia and more than a hundred telegraph offices.

For a long time Broken Hill was the rail-head of the Cape-to-Cairo trunk line. The late Alfred Beit, who, like Cecil Rhodes, made a great fortune in South Africa, left six million dollars to be used for the extension of the system, "to be employed toward pushing the road to Lake Tanganyika." However, the copper mines across the border diverted the line to Bukama in the Congo province of Katanga. To-day the trip from Cape Town to Cairo may be made by railroad to Bukama, by steamer up the Lualaba River to Kabalo, and by railroad from Kabalo to Albertville on Lake Tanganyika. After crossing the lake to Kigoma, and taking another train to Tabora, the next part of the journey is over the motor road to Mwanza on Lake Victoria. I have already described the journey from the lake to Khartum and down the Nile. The present route, traversed by river, rail, highway, and footpath, is nearly seven thousand miles long, and the trip takes about eight weeks. It is still hoped that some of Beit's money will be used to run a line from Broken Hill to Tabora and thence north to Sennar on the Blue Nile, which is connected by rail with Khartum. The projected Cape-to-Cairo air route has not yet proved commercially practicable, though the entire distance has been covered by airplane.

The Cape-to-Cairo line should be considered as a steam route, including in that term transportation by ship and train. There will probably never be one continuous iron track north and south across the continent. It is doubtful if the traffic ever will warrant it, and besides, there are deep waterways that can be used for almost one third

of the way. The longest stretch of rail, comprising almost half the route from the Cape of Good Hope to the Mediterranean Sea, will be that from Cape Town north to Lake Tanganyika, a distance as long as from New York to Great Salt Lake.

The railroads of Rhodesia were planned by Cecil Rhodes, but he died before they had crossed the Zambesi, and the greater part of his journeys through the country were in ox wagons. To-day there are trains de luxe, with sleepers, diners, and shower baths. One can board such a train at Cape Town and ride to the head-waters of the Congo, a distance of two thousand miles. The meals are good and the prices cheaper than at home. The second-class tickets cost about one third less than the first-class fare, and the third-class rates are not half as much as the first. Those who wish to travel without regard to cost may have private cars, each of which has a dining room, a kitchen, a bathroom, and bedrooms for six people. The railroad company furnishes a cook and all provisions at rates that seem to me extremely reasonable.

When the road was first built passengers had to carry their own food and bedding. The travel through the wilds was light, and the demand for comforts did not warrant the expense of furnishing them. However, a few thick blankets enabled one to sleep well on the ordinary cushions of the car.

The question of food was a more difficult matter. On one of my trips over the road I had a tin cracker box filled with such things as canned tongue and ham, with several varieties of pickles, which served as a relish. I started out with some canned butter, but I will say nothing about that; it was amply strong enough to speak for itself. In

its place I used jam to spread on top of the sandwiches I made from the three loaves of bread I had brought with me from Victoria Falls. At meal times the black boy in charge of the car brought me a kettle of hot water from the engine, and I made my tea with compressed tea pills. They were as big as the end of my little finger, and one would make a full cup. Each tabloid was as hard as a stone until the water touched it, when it dissolved and gave forth a delicious aroma. The pills were put up in tin boxes so small that I could carry in my pocket enough for a hundred cups. I had also a little box of saccharine, made into pills no larger than the head of a pin, yet so sweet that a single one was enough for a cup of tea.

Because of the white ants that infest the regions north of the Zambesi, the telegraph poles and railroad ties are of steel all the way from there to Bukama. The ties are semi-cylindrical steel shells about seven feet long with clamps into which the rails are fitted. All the railway stations are made of galvanized iron. The ants live on wood, and would burrow into wooden ties until nothing but a shell was left. If wooden telegraph poles are erected the insects chew them until they fall to the ground. When Rhodes was planning his railroad and telegraph systems for Rhodesia, experts assured him that the ants would balk him in spite of everything.

"How are your telegraph poles and your railroad ties to be protected from the white ants?" they asked.

"Make them of iron," replied Rhodes.

"But what will your iron telegraph poles avail against wandering herds of wild elephants? They will use them for scratching posts."

"What of it?" answered Rhodes with a shrug, and went on with his plans.

White ants are to be found all over Central Africa. During this trip I have seen tens of thousands of their hills, some of them twenty feet high, while others do not reach to the height of my waist. They extend as far below the ground as above it, and the interior of each hill is divided up like an apartment house. The ants have their soldiers and their guards, their workers and their drones. The eggs are laid by a big queen that looks for all the world like a white worm the size and shape of a small frankfurter sausage. During my stay in Uganda I was offered one of these queen ants as a present. It had been found by an English army officer and pickled in alcohol. Fearing, however, that the bottle might break, I had to refuse.

Notwithstanding their destruction of wood, the white ants are of value. The ant hills are built grain by grain by these little insects, which, as they work, moisten the clay with an excretion from their mouths that changes it into a sort of cement that becomes as hard as stone. When mixed with water, however, the clay softens and hence is used by the natives as building material. They start their huts by erecting a framework of sticks, which they weave in and out as in making a basket. Over this they spread the wet clay from the ant hills. After a time the walls become as solid as rock, and form a perfect protection in all kinds of weather. In some places the huts are composed entirely of this material, while in others they end in cones of thatch. Many of the pioneers of Rhodesia live in such huts, and there is a mission church here in Broken Hill that is plastered with red clay from the

abandoned homes of the white ants. The church is also floored with such clay, but its overhanging roof is of galvanized iron. It was put up by the Reverend John M. Springer, who for a long time was the head of the Methodist Episcopal missions at Umtali.

This part of Northern Rhodesia is known as Barotseland. I am surprised at its extent and its resources. The general idea of Central Africa is that it is a lowland jungle filled with infectious diseases. The truth is that much of the continent is high and healthful. Algeria and Morocco at the north have as good a climate as Italy, and Abyssinia is as healthful as almost any part of Europe. A large part of Kenya Colony consists of plains more than a mile above the sea, and the same is true of sections of Tanganyika Territory. Most of Southern Rhodesia is high also, and so is a great part of the region from there to the Cape of Good Hope.

The land between the Zambesi and the Congo watershed is composed of high plains on each side of the Kafue Valley. I rode for three hundred miles and more over open, grassy plateaus, spotted here and there with low trees and brushwood. Nearly everywhere the land seems suitable for cattle raising.

In Southern Rhodesia and in parts of Northern Rhodesia is a spear-headed plant known as assegai grass, which kills the sheep. The blade of this grass comes to a sharp point, with barbs extending down toward the ground. When it gets into the sheep's wool it penetrates the skin, and finally works its way through the flesh, just as a needle sometimes travels through the human body. It is not injurious to cattle, however.

CHAPTER XXIV

THE COPPER HILLS OF CENTRAL AFRICA

THE mines in the Broken Hill district are operated by the Rhodesia Broken Hill Development Company, which owns a large number of properties scattered here and there over this part of Central Africa. It is said to have located six thousand different mineral claims in Northern Rhodesia. Indeed, the whole country is peppered with minerals, including lead, zinc, copper, gold, and iron.

Prospecting is far different in Rhodesia from what it is in the United States, where the mineral regions are usually broken and mountainous. Here the country is comparatively level, and there are but few rocky outcroppings. During the wet season from December to May some of the land is covered with grass so high that a man riding through it on horseback cannot be seen a hundred feet away. During the rainy season travelling is difficult, and it is only in the dry season that the surface of the ground can be examined and that prospecting goes on. The grass, which is parched and dry, is fired, the flames sweeping over the country, burning everything they reach. The prospectors are then able to study the surface and observe various formations. They first pan the sand or gravel in the streams and later try to trace to the mother lodes any minerals thus found.

The deposits here at Broken Hill lie right out on the

prairie. The land is almost level, and with the exception of a few hills that reach to a height of less than one hundred feet there is no sign of minerals. These hills rise from the plain like mounds and are usually so low that they cannot be seen at any great distance. There are seven in sight of Broken Hill, and they all contain great bodies of zinc and lead ores. Hill Number One, over which I have just gone with the miners, is three hundred feet wide at the base, and rises to the height of a four-story building. It is pear-shaped rather than round, with the large end of the pear below the surface. The two tunnels that have been put through it on a level with the plains have shown that the entire hill is a solid mass of lead and zinc ore. The ore in the main tunnel assays fifty-eight per cent. lead and eight per cent. zinc. Drillings have disclosed that the ore extends one hundred feet below the surface.

I next accompanied the mine manager to Hill Number Two, about a half mile away over the plain. It is ninety feet high and contains about four times as much ore above the surface as Hill Number One. Most of the ore is thirty-five or forty per cent. zinc. The five other hills rising above the surface of the plains are all mighty nuggets of metal, and the officials at the mines tell me that there is enough ore in sight to keep them busy for years. The zinc deposits have proved of less practical value than the lead because no cheap process of extracting the pure metal from the ore has been found.

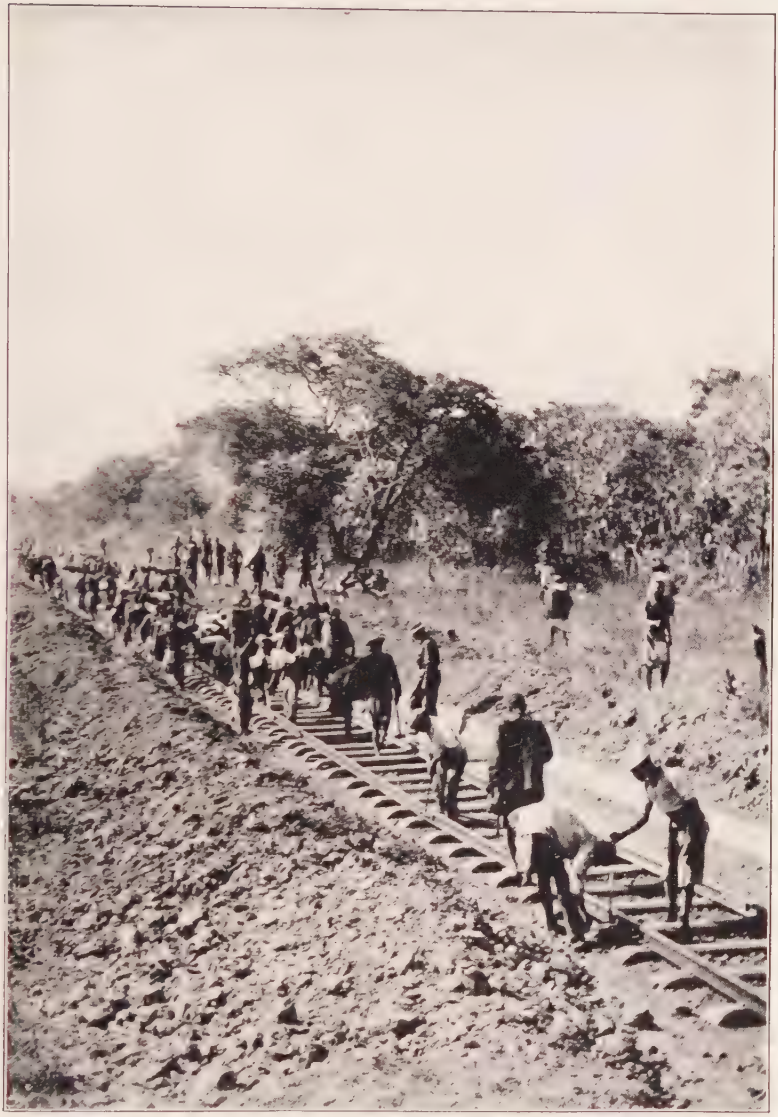
Robert Williams, a Scotchman, was one of the first to become interested in the mines of Northern Rhodesia. He obtained from Cecil Rhodes the right to locate one thousand claims, on condition that the British South Africa

Company be paid thirty-five per cent. of the value of all the minerals taken out. Rhodes was persuaded to grant the concession because he wanted a steamboat on Lake Tanganyika to enable him to push his Cape-to-Cairo railroad scheme, and I am told that Williams furnished the boat.

Among the first deposits discovered were those of the Kansanshi copper mines not far from the Belgian Congo. After prospecting about Kansanshi, Williams believed that there might be important finds over the border. With his mining engineers he went on into the Congo, and there found the enormous copper deposits of Katanga. Returning to London, he formed a mining syndicate and secured a concession from King Leopold of Belgium by offering him and certain Belgian capitalists half the stock.

The Katanga deposits are a mighty copper roof, as it were, on the lower part of the African continent. They lie on the height of land between the Congo and the Zambesi, corresponding to the vast mineral deposits on the height of land of our continent. The great ridge of North America comes to its peak just north of Lake Superior. On that ridge is Sudbury, near which is the largest body of nickel known to the world. A little farther east are the silver deposits of Cobalt, and to the south are the iron and copper mines of Michigan and Minnesota.

A similar wealth of minerals exists on this great ridge of Africa. The copper belt covers a territory two hundred miles long and from thirty to sixty miles wide. More than one hundred deposits have been found, and the engineers say that there are more than fifty million tons of copper in sight. Indeed, if half the estimates as to the extent of the metal are correct, these ore beds must be among the most valuable in the world.



Though Cecil Rhodes planned the greatest railway route in Africa, he died before the rail-head reached the Zambesi. To-day one can ride in comfortable trains from the Cape two thousand miles north to the head-waters of the Congo.

Near Broken Hill are seven great mounds rising above the plain and containing nothing but lead and zinc ore, which is mined by natives of the neighbouring Bantu tribes.

A secretion from the mouths of the white ants of Central Africa turns the clay from which they build their hills into a cement-like substance that is used by the natives to make the plaster of which their houses are often constructed.

Although most of the ore is about seven per cent. pure copper, there are large deposits that average ten to twenty per cent. and some as high as thirty per cent. New mines opened in a single year since the World War are estimated to contain five million tons of ten per cent. ore and almost two million tons assaying nineteen per cent. of copper.

The first white men to explore the Katanga region noticed that the natives wore copper ornaments and used a sort of crude Saint Andrew's cross of copper for money. For generations the natives have been mining and smelting copper and making it into hoes, spears, and axes. I have a copper axe before me as I write, and a copper hoe stands by my side. Both the handles and the blades are made of solid metal. As much of the copper lies at the surface of the ground, the mines can be worked like quarries. The natives take the ore from little holes that they have dug into the hillsides, and smelt it with charcoal in crude furnaces. One of the chiefs employs a large number of men and women as miners and is producing several tons of copper a year.

The chief mining company operating in Katanga is a Belgian corporation known as the Union Minière. About half the shares are owned by the Tanganyika Concessions, Ltd., which is a British company. The Union Minière's mines are producing between forty and sixty million pounds of copper a year, and thousands of natives are employed at the smelter at Lubumbashi. Until the railroad was built into the territory, only the smallest furnaces could be used, as the machinery had to be carried in pieces through the wilds on the heads of porters.

Although large areas of the plateau country are said to be free from "fly," the Negro population of Katanga has

suffered severely from sleeping sickness, and the total number of natives in the province is little more than a million. They are not good workers, and one of the great difficulties in operating the copper mines is in getting sufficient labour. It is said that some twelve thousand natives are required to mine enough ore to keep the furnaces fully supplied, and that the number obtainable in the province is only about seven thousand. Labour for the mines is therefore recruited from Rhodesia and from Portuguese territory.

The copper district occupies only a small part of the province of Katanga, which covers a fourth of all the Belgian Congo. Geographically, it is a part of Rhodesia, with a similar animal and vegetable life and a climate much more healthful than the rest of the Congo. The southern portion, known as High Katanga, has an altitude of four thousand feet or more, and is the part best suited to white people. In the north the altitude is lower, and malaria is more prevalent and severe.

As a magnet for railways, Katanga is a second Transvaal. It now has rail connections with Cape Town, Durban, Beira, and Lourenço Marques. From Dar-es-Salaam it can be reached by railway and steamer across Lake Tanganyika, and it has direct access to the Atlantic Ocean, two thousand miles distant, by way of the Congo River. Still another railway is being built toward the province from Lobito Bay, the best harbour on the west coast. In only a few years Elizabethville, founded in 1910 as the capital of the province, has grown into a thriving city, with a theatre, a hospital, a public library, and several hotels and clubs.

CHAPTER XXV

ACRES OF DIAMONDS AT KIMBERLEY

A JOURNEY of nearly fifteen hundred miles has brought me to what is undoubtedly the world's greatest treasure vault. I am at Kimberley, the famous diamond town of South Africa, situated in the province of the Cape of Good Hope, which is one of the states of the Union of South Africa and the southernmost political division of the continent. One thousand million dollars' worth of diamonds have already been taken from the diamond mines of Kimberley, and there are still vast fortunes in precious stones under the ground. For a long time the annual output was worth from twenty to thirty million dollars, or almost one hundred thousand dollars for every working day the whole year through.

To look at Kimberley, no one would ever think it was the centre of such wealth. Like the jewels of Portia, its treasures are kept in caskets of lead. The town has no palaces or sky-scrapers, and a few thousand dollars would cover the cost of almost any building here. The offices of the diamond trust itself are unpretentious and give no indication of the great wealth that passes through them. Most of the houses are bungalows of brick roofed with sheet iron and surrounded by wide verandas; many of them stand in gardens filled with beautiful flowers and trees. Kimberley has clubs and amusement grounds, a

theatre, churches, and hotels. Its stores are large and seem to be doing a good business.

The streets of Kimberley, though wide, are winding and irregular, and follow the lines of the trails made when the first mining camp was started here after the discovery of diamonds in 1870. The railway from the Cape reached Kimberley in 1885, stimulating its already rapid growth. The city now has a white population of twelve thousand or more, and between thirty and forty thousand blacks.

Kimberley is full of reminders of the Boer War. On Memorial Hill is a memorial, built of stone brought from Rhodesia, in honour of those who fell in defending the town during the Boer siege. At that time the water supply from the Vaal River, seventeen miles away, was cut off by the Boers, and there was great suffering among the inhabitants until it was discovered that the water in the Wesselton diamond mine could be pumped into the reservoir and used as a temporary supply.

It is now more than a half century since the first diamond was discovered in South Africa. A Boer farmer named Van Niekirk had been shown a pretty, bright stone by a woman whose children had found it among the pebbles on the banks of the Orange River. The farmer was willing to pay for it, but the woman laughed at such an idea and said he might have it for nothing. One evening Van Niekirk spoke of the stone to a trader named O'Reilly, who was stopping overnight at his farm. O'Reilly offered to try to sell the stone and to divide whatever he could get for it with the Dutchman. For a long time, however, people scoffed at the idea of this bright pebble having any value at all. It was finally identified as a diamond by Dr. W. G. Atherstone and later pur-

Many of the hardest fought battles of the South African War took place about Kimberley, and to-day a memorial marks the spot where many fell defending the city when it was besieged by the Boers.

Though the settler in the newly opened section of Rhodesia may be far from the comforts of civilization, he can transform his mud hut into a cozy bungalow by the addition of a thatched veranda and some morning glories.

The trackless regions of Northern Rhodesia, which were first penetrated by Livingstone more than a half century ago, are now explored by hunters and scientists who travel with every camping convenience.

chased by Sir Philip Wodehouse for twenty-five hundred dollars, half of which O'Reilly, according to his bargain, paid to Van Niekirk.

Two years later Van Niekirk learned of a Hottentot boy who had found a shiny stone on a farm where he was working. It was a white diamond of great purity, weighing eighty-three and one half carats. The Boer bought it of the boy for five hundred sheep, ten oxen, and a horse, worth all together about two thousand dollars. It was sold to the dealers for fifty-six thousand dollars and was afterward purchased by the Earl of Dudley for his countess for one hundred and twenty-five thousand dollars. That was the famous "Star of South Africa," considered the most beautiful diamond ever mined in the Union.

These two finds set South Africa diamond crazy. Seekers for the gems came by the thousands, and the banks of the Vaal and the Orange rivers were soon covered with mining camps. Prospectors were everywhere digging up the gravel and searching for stones. As the river beds became exhausted, the miners spread out over the country, and finally reached Kimberley. One day a Boer discovered some diamonds in a clay bed out of which he was taking material to build a mud hut, and at about the same time other finds were made near by and claims taken up and developed. As the miners dug farther and farther into the ground, they discovered that the diamonds were always found in a sort of hard blue clay inside great walls of different and still harder rock. These walls were in the form of pipes extending down, down, down into the earth, and each pipe was filled with this blue substance through which the diamonds were scattered.

Until these Kimberley mines were discovered, all the

diamonds known to the world had been found in gravel that lay on or near the surface of the earth, and were called alluvial diamonds. The Indian gems, among which are the Kohinoor, the Great Mogul, the Regent, and the Orloff, came from alluvial washings composed of a mixture of broken sandstone, quartz, jasper, flint, and granite. The deposit was about twenty feet thick and was covered with a few feet of black soil. It lay near the bed of a river in India not far from the city of Golconda, the diamond centre of olden times. The diamonds of Brazil, first discovered in 1728, were found along the banks of rivers in deposits of clay, quartz, pebbles, and sand, about thirty feet underground, and in a few instances were imbedded in sandstone. The diamonds of Borneo, British Guiana, Australia, and California, and those first discovered along the Vaal River near here in South Africa, came from similar formations.

There are five mighty diamond pipes close to Kimberley, forming about it one of the most valuable necklaces on earth. All the mines now belong to the De Beers Company, which practically controls the production of diamonds in the Cape province. Their mines are known as the Kimberley, the De Beers, the Wesselton, the Bulfontein, and the Dutoitspan. The diamonds from the different pipes vary in value, but every one of the pipes contains gems that would have dazzled Aladdin or made covetous the heart of Sindbad the Sailor.

All these mines are within a rifle shot of the centre of Kimberley. If we climb to the top of the higher buildings in the town we can see the skeleton-like machines where the diamondiferous earth is washed, and the vast weathering floors where the clay containing the gems is spread

out to disintegrate. Moving between them and the mines are great lines of what, in the distance, seem to be ants marching in single file. With our field glasses we can make out that each ant-like object is a steel car filled with this earth. The black pygmies handling the cars are the natives, and the white ones are the guards who keep the blacks from stealing as they work.

Turning our glasses to the mines, we see the mighty pits where the earth was cut away until the great rock pipes, containing the blue clay and the diamonds, were found. The origin of the gems is supposed to be volcanic, and the late Gardiner Williams of Washington, who managed the mines for years, believed that they were shot up from the depths of the earth in the course of eruptions of mud. There is no doubt that the pipes were formed by some convulsion of Nature.

Like any other luxury producing industry, the diamond business has violent ups and downs. In order to hold up prices and to keep the market from being flooded, at times the mines are shut down entirely. The industry is especially dependent on prosperity in the United States, which takes about three fourths of the output of the Union of South Africa. During the orgy of spending that followed the World War, for example, people in America who had never before dreamed of owning diamonds came into the market demanding the best and running up the prices enormously. Then came the depression of 1920, the diamond demand collapsed, prices dropped, and mines were closed. The panic of 1907 in the United States produced a similar depression in the diamond industry of South Africa.

The diamond mining companies in South Africa co-

operate with the London diamond syndicate to control the output and thus keep up prices. If the output were not limited, the market could be so flooded with gems from the vast stores here that they might become almost as cheap as rhinestones. Higher prices for diamonds therefore do not indicate diminishing supply at the mines. All the diamonds of the De Beers Company now go to the diamond syndicate, which contracts to take so many million dollars' worth of the stones every year at a fixed price, and more if the demand justifies it. The De Beers Company, on the other hand, agrees not to sell diamonds to any one else but the syndicate.

Because of this arrangement it is not an easy thing for a traveller to buy an uncut diamond in Kimberley, while any one who might purchase a rough stone of a stranger would be in danger of imprisonment. The laws here provide that no one may buy diamonds without first taking out a license, and that all diamonds bought and sold must be shown to the government officials in order that they may be valued. Every man who takes a diamond out of South Africa must have a certificate showing where he got it.

Having a special introduction to the officers of the diamond syndicate, I was able during my stay to buy a rough stone of a few carats at about the wholesale price in London. Afterward I had to go to a half-dozen different officials to secure the papers showing that I owned the diamond, and I have paid the customs duty necessary to get it out of Cape province.

A ten per cent. export tax is charged on all rough diamonds exported from the country. Until a few years ago this meant the entire production, as practically all the

The diamonds of Kimberley are found in a kind of blue clay inside cylindrical rock formations known as pipes, some of which are as wide as a forty-acre field and extend down into the earth for many hundreds of feet.

The pipes of blue clay carry diamonds throughout their entire extent, and any one of these tiny cars bringing the earth from the mines in an endless procession may contain a royal gem.

stones were sent to Europe to be cut. Now a diamond cutting company capitalized at ten million dollars has been organized to operate in South Africa under a government guarantee that it shall receive twenty-five per cent. of the output of the De Beers mines, the Premier mine in the Transvaal, the Jagersfontain mines, and of those of Southwest Africa.

CHAPTER XXVI

A DAY IN THE DIAMOND MINES

TO-DAY I have spent in the diamond mines, and in the offices of the syndicate that buys all the stones found at Kimberley. I have been down inside the great rock-walled pipes containing the diamond clay, and have visited the compounds where the black labourers are kept under guard at all times. I have heard stories of how thefts are continually being attempted and prevented that make the average detective tale seem tame and insipid.

I went first to the Kimberley mine, which is only a three-minute walk from the market square of the city, and which gives one an excellent idea of how the diamonds lie in the earth. The pipe begins with a great funnel-like hole that has a mouth about three hundred feet wide. Its sides slope down evenly to the pipe proper, in which the blue clay is found. It is almost round and about eight acres in area. Its walls are of black rock as regularly shaped as though cut by a chisel, and narrowing but slightly as they extend downward for more than thirty-five hundred feet. Diamonds have been found everywhere in the blue ground to that depth, and it is estimated that there are still millions of dollars' worth of stones farther down.

A mile east of the Kimberley mine is the De Beers, and farther on is the Dutoitspan, the greatest of all the mines

in this region, and so big that both the Kimberley and the De Beers pipes could be lost inside it. Although it is not yet nearly so deep as the Kimberley, it has more than thirty-eight miles of tunnels in its underground workings. These have been run into the diamond-bearing earth at intervals of forty feet from a great shaft that has been sunk outside the pipe. In that way this forty-acre pipe has been explored to a depth equal to one and one half times the height of the Washington Monument, and the clay has been found peppered with diamonds throughout. Extending through the pipe from top to bottom are great wells that have been made so that the blue clay from each level can be dropped down them into reservoirs at the very bottom. There it is loaded by gravity into the cars that carry it to the shaft.

One of the managers of the Dutoitspan took me to the shaft of the mine. We dropped quickly to the lowest level and made our way on foot through the tunnels into the great pipe. The mines are dirty and the rock is so sharp that it cuts one's shoes, so I had to put on boots of sole leather and a suit of miner's clothing. We walked along one of the tracks, passing trains of blue ground being hauled by American electric locomotives. As the cars reached the shaft they were dumped without stopping. Their contents fell into a great iron skip, which a touch of a button sent to the top. The arrangements were such that two boys could unload four thousand cars in eight hours.

As I watched the cars of clay dashing by I asked the De Beers official with me to give me some idea of its value. He replied that the yield in diamonds averages about thirty-seven thousand dollars a day in the Dutoit-

span. That means fifteen hundred dollars an hour or twenty-five dollars a minute, day and night, week in and week out. Occasionally this figure is greatly increased, as for example when a stone weighing four hundred and forty-two carats was found in the clay taken out through this shaft a few years ago. This diamond was the largest ever discovered in the Kimberley mines.

We walked for miles through the tunnels made in the pipe to get out the diamond-studded soil. Much of the mine is unlighted, so we had to pick our way along with candles, jumping to this side and that to avoid being run down by the continuous line of cars. The tunnels are about as high as one's head and so narrow that the cars almost touch the sides. Here and there they are intersected at right angles by other tunnels, and at times I could see an electric light at a crossing far in the distance.

I found natives at work everywhere I went in the mine. Here they were loading the blue rock upon cars, there they were dumping it down through the wells to the reservoirs below, and in one place they were blasting the rock. I cannot describe the terror inspired by these explosions six or seven hundred feet underground. A boom like that of a big naval gun strikes one's ear drums, the vibration blows out the candles, and the sickening smoke from the dynamite fills all the tunnels near by.

Thirty-six thousand blasts are shot off in this mine every week, yet accidents are few. The amount of explosives used is enormous. In one year in all the mines of the De Beers Company more than three million pounds of dynamite were consumed. The Company operates a dynamite factory not far from Cape Town, finding it both cheaper and safer to make its own explosives.

I followed the diamond clay to the fields or floors where it is left to weather, and thence to the washing machines where the stones are finally extracted. As it comes out of the tunnels, the blue ground is so hard that one could drive a nail with a chunk of it. I could barely scratch it with my knife, and it can be broken only with a heavy hammer. As it comes to the surface it bears no sign of diamonds. I looked over scores of cars of it without seeing a single gem imbedded in the blue clay, and I am told that the stones are seldom discovered until the final washing.

Every one of the mines has its own weathering floors. These are fields covering a total area of several thousand acres, where the earth has been rolled as hard and smooth as a tennis court. The clay is spread out there to a depth of one foot and lies for a year or more, being plowed and harrowed from time to time. During dry spells it is sprinkled with water, in order to hasten the disintegrating process. The weathering softens the hard blue lumps so that when they go into the washing machines the diamonds can be separated from the earth.

There are often ten million carloads of blue clay lying out under the sun about Kimberley, containing perhaps twenty-five million dollars' worth of diamonds. Think of gems worth that sum being scattered over the vacant lots on the edge of any city of fifty thousand or so in the United States, and you have some idea of the situation at Kimberley. However, it is no easier for the citizens to help themselves to this vast wealth than if the stones were in Timbuktu. The fields are watched day and night by armed guards. Electric lights keep them bright from sunset to sunrise, and they are surrounded by entanglements

of barbed wire so high that a man cannot easily climb over them, and with strands so close together that one cannot crawl through. There are two such fences around every field, about twenty or thirty feet apart, and the guards march between them. If a thief could crawl over the first one he would be sure to be shot before he got to the second, and so the diamonds are comparatively safe.

From the fields the rock is carried to the washing machines, where it is divided into two classes, one soft and one hard. The clay that has not been softened by exposure to the weather has to be reduced to a powder before the diamonds can be taken out. This is done in mighty steel crushers that grind up the rock without breaking the still harder diamonds within. The coarser pieces are then crushed again, until they are of the same consistency as the soft, weathered earth. All the earth is then washed to eliminate the waste. Out of every hundred loads of the mixture comes perhaps one load of gravel, which contains the diamonds.

All the gravel obtained in this way was formerly sorted over by hand, both natives and whites being employed in the work. That method, however, afforded many opportunities for stealing, and it was found also that many of the smaller stones were overlooked. Indeed, some of the gravel that was handled in that way years ago is now being gone over again at a good profit.

Later the gravel was run through a series of iron tables corrugated like a washboard and covered with grease. These tables were constantly vibrated by machinery. The shaking brought practically every stone, at one time or another, in contact with the grease. Curiously enough, diamonds would stick in this grease, while nearly all the

other stones passed along without catching. Every few hours the tables were stopped and the grease scraped off. In it, besides all the diamonds, were small bits of iron pyrites, garnets, and pieces of metal from the miners' boots and from the copper fuses used in the blasting.

To-day the diamonds are recovered by passing the gravel through what is known as a pulsator. This is a sort of hopper, out of which the gravel drops, a small amount at a time, upon a table that has a thick coating of grease under several inches of running water. The diamonds, being the heavier, drop through the water into the grease, while the gravel is carried on by the flow of the water. The gem-laden grease is put into a perforated steel bucket and sunk into boiling water. The melted grease floats on the top of the water and may be poured off, leaving only the scraps of metal and the diamonds. The latter are picked out, cleaned, and sorted, after which they are ready to be valued for the market.

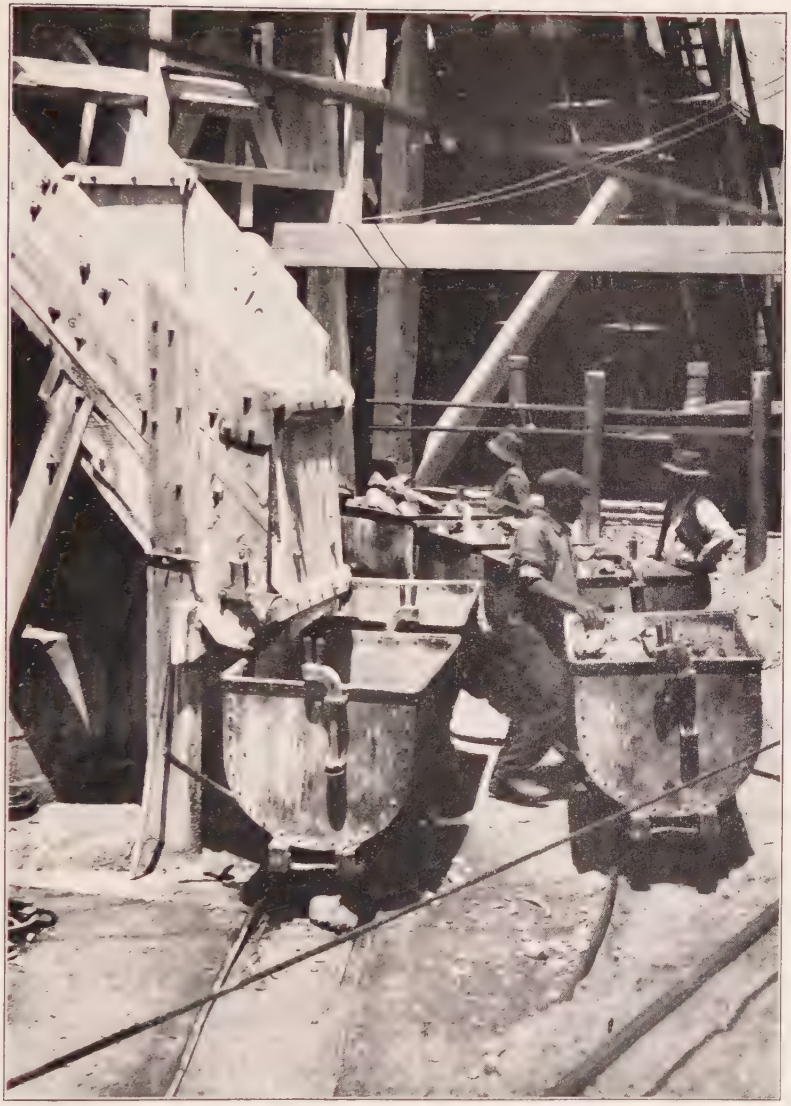
I spent some time watching the sorters. Each man had on a table before him a handful of diamonds of all shapes and sizes, and was picking them up one by one with a pair of tongs and dumping them into an ordinary tin cup. As I looked on, one of the sorters lifted up a little white stone, saying: "This is worth five hundred dollars," and then showed me another, not much larger, worth double that sum. The manager afterward poured out a pint of diamonds on the table, showing me some that were worth sixty dollars a carat, and others much cheaper. When he had finished he scooped up the diamonds with a little shovel and tossed them back into the cup just as though they were so many peas.

Later I visited the company's offices in Kimberley it-

self, and was shown quarts of diamonds from the various mines. The sorters can tell by its shape and colour from just which pipe each diamond has come. I held in my hand a little bundle that contained about a pint of small stones, the value of which approximated a half million dollars, and I was shown other bundles containing gems as big as the end of my finger. There were many stones that were absolutely perfect, and some appeared to be almost ready for setting, while others were broken bits and mere chips from larger stones. The diamonds were of different colours. Some were as yellow as topazes, others a light blue tint, and many pure white.

In going through these mines, the output of which is reckoned in millions, I was impressed by the economy everywhere evident. Not a cent is allowed to go to waste, the most careful watch being kept to avoid any extravagance. As we went through the Dutoitspan we passed a chamber where an electric light was burning, although the work had been stopped for the time; for this neglect the man in charge was reproved by the official with me. In another place a white boy who was keeping tally of the cars allowed one not quite full to go by. He was warned that he must not credit half cars for full cars, and that he would lose his job if he did not keep his eyes open. The same watch for the little leaks is kept up in the engine rooms, in the washing plant, in the management of the weathering floors, and, in fact, in every part of the works. The De Beers Company can pay big dividends because it is well managed, and it makes one feel proud to know that, although the mines are operated almost entirely by British capital, many of the managers are Americans.

I walked around the Kimberley mine with an American



In some of the mines the diamond-bearing earth is taken out of open pits, and in others through a shaft sunk outside the pipe, tunnels from this shaft penetrating the deposit at different levels.

The diamondiferous earth is spread out on vast weathering fields, where it remains for a year to be disintegrated by the rain and the sun before being washed for precious stones.

mechanical and mining engineer who was a graduate of Cornell, and it was in company with another American mining engineer that I explored the underground workings of the Dutoitspan. In fact, American mining experts are everywhere prominent in the operation of the De Beers mines. Rhodes first introduced them, "because they are so thorough," he said. The late Gardiner F. Williams, afterward a resident of Washington, D. C., opened and developed the Kimberley mines and was the general manager until 1905, when he retired in favour of his son, Alpheus Williams.

Many of the De Beers staff live in the model village of Kenilworth, which the company has built near Kimberley. Its white employees often number three thousand men, although this number is much reduced when production is low.

The native miners are Kaffirs from the various tribes of South Africa, the company preferring to have its men from as many different localities as possible in order to minimize the danger of labour troubles. These blacks work well and are more efficient than the ordinary African labourer. They are big fellows, strong and muscular. Those I saw in the mines were bare to the waist, although most of them had on trousers and wore shoes to protect their feet from the rocks. Each gang was in charge of a white overseer. The laws prevent any mistreatment of the blacks, who have the right to lay their complaints before a "protector of labour" appointed by the government. The natives are never hired for less than four months at a time, and the Company is glad to keep them as long as they will work.

These thousands of native miners are practically in

prison. They have to contract to stay inside the compounds or great walled enclosures that constitute the native quarters of each mine, and the Company sees to it that they keep this part of their agreement. Every compound has a tunnel leading into the works, down which the labourers march under guard to where they dig and blast out the blue rock far below the surface. Those who work above ground are not allowed to mix with the underground workers, and every precaution is taken to prevent the diamonds from being stolen and smuggled out.

The Dutoitspan compound contains about seven acres and looks for all the world like a great racing park surrounded by stables. In the centre of it is a platform that might be compared to a race-track grandstand, and all around the walls are rooms about twenty feet wide and thirty feet deep, which correspond to the stalls for the race horses. The grandstand is the public bath where the black boys wash themselves as they come from the mines, and the stalls are the rooms where the men live. They are walled with bunks, and about thirty natives sleep in each room. The men buy their provisions from stores within the enclosure and do their own cooking. Adjoining their quarters are the offices of the managers of the compound, a hospital for the sick, and rooms for the guards.

The natives are carefully watched to prevent them from stealing any diamonds while they are working. Their rooms in the compound are built against a wall, around which armed guards are always marching. One hundred feet beyond this wall is a fence about fourteen feet high, and outside that are other guards. The compound is roofed with fine wire netting, so that it is impossible for

a worker within to throw diamonds over the fences to confederates outside.

A miner who quits the employ of the company is not allowed to leave the compound until several days after he has stopped working, whether above or below ground. During that time he is stripped naked and put into a room so warm that he will not catch cold. He is kept there for several days and watched all the time. Every bit of his person is gone over to see that he has no precious stones concealed anywhere upon it. His toes, ears, teeth, gums, and hair are examined, and if he has any sores on his body they are probed. During this period the natives must wear mittens of sole leather so stiff that they could not pick up a diamond if one lay on the floor before them.

On the other hand, the miners are paid for being honest. Every man receives a dollar and a quarter per carat for the diamonds he discovers and hands over to the overseer. The other day a Negro dug out a gem as big as a walnut. It weighed more than one hundred carats, and he received a premium of one hundred and fifty dollars for his find.

It used to be that many diamonds were swallowed. About ten years ago one as big as a chestnut was thus disposed of, and the Negro succeeded in keeping it for more than a week. In 1895 about four thousand dollars' worth of stones were swallowed, but all of them were finally recovered. The same practice would go on to-day were it not for the imprisonment in a naked state and the medical and dietary treatment to which all must submit before they are allowed to depart.

Smuggled gems have been found in boot heels, in hollow canes, and in dinner pails with false bottoms. The min-

ers sometimes make gashes in their flesh and try to conceal diamonds under the skin. They put them in cavities in their teeth, under their toes, and in every conceivable place. The inspection of the men grows more rigid from year to year, and the detectives have become so expert that it seems beyond human ingenuity to devise any means of smuggling diamonds with which they are not already familiar.

As I have said, after the diamonds have been mined and cleaned, they are sold to the diamond syndicate. I visited the offices of this organization and had a look at the steel vaults in which the stones are kept until shipped to London. To my surprise I learned that the packages of stones, each of which is enormously valuable, are forwarded all the way by registered mail. The cars that carry them the six or seven hundred miles from here to Cape Town are equipped with safes, the steel bottoms of which are a part of the floors.

Some years ago a would-be diamond thief had the idea that if he could cut out this steel plate a million dollars' worth of diamonds would drop into his hands. He prepared for his work by crawling under the car before it started. He had a board under him and lay there on his back during the first part of the journey, while he drilled forty-nine different holes up through the safe. He had completed the drilling and was cutting from one hole to another with a steel saw when something made him think he was discovered, and he dropped out and ran. It proved to be a false alarm, and he might easily have had the diamonds had not his nerve failed him.

Since then the safes have been so improved and strengthened that it would be impossible to cut through

It is next to impossible for any one to steal a diamond at Kimberley. The workers are always under guard, while the drying fields are enclosed in tangles of barbed wire that is highly charged with electricity.

Of all the states of the South African Union, Natal, on the southeast coast, is the most attractive. Because of its pleasant climate, productive lands, and beautiful scenery, it is known as the "Garden of South Africa."

them. It would seem, however, that the trains might easily be held up by robbers and that a little dynamite or nitroglycerin would suffice to lay their contents bare to the thieves. Certainly such enormous values in diamonds could not be regularly carried over some parts or the United States without danger.

CHAPTER XXVII

JOHANNESBURG, GOLD CITY OF THE WORLD

JOHANNESBURG is the golden capital of South Africa. It lies on a rocky reef known as the Rand from which has been taken out gold to the value of hundreds of millions of dollars, and in which are supposed to be left two or three thousand millions more. Its streets traverse ground that has been honeycombed with tunnels and filled up again after the gold was taken out for fear that the earth under the city might cave in. From the roofs of the high buildings I can look east and west and see the smokestacks of mine works extending almost to the horizon, and there are white mountains of tailings standing out upon the landscape.

This city makes me think of Denver. It is about the same size, and, like the metropolis of the Rockies, it is situated far in the interior on a plateau more than a mile above the level of the sea. The land about it is half desert, and was of such little value at the time gold mining began that a two-thousand-acre farm was bought for a team of broken-down oxen. To-day the land and the buildings on that farm are assessed at a quarter of a million dollars, while all about it is real estate of an assessed value approximating two hundred millions. In the early 'nineties, ten years after the city was founded, two lots on Commissioner Street brought more than one hundred

thousand dollars, and a little later a single lot was sold for eighty thousand dollars.

Johannesburg, always called "Joburg" here, once had so many structures of sheet iron that it was known as the "tin town with the golden cellar." It now boasts many handsome and substantial buildings, and is by far the biggest and finest of the African cities south of Cairo. The people have built attractive, comfortable homes for themselves, and have provided their city with every modern improvement. It has seven hundred miles of roads and streets, forty-five miles of electric railways, a wireless station, and one of the largest electric light plants in the world.

Though it is a worshipper of mammon and annually produces enough of the yellow metal to make a herd of golden calves, Johannesburg has one hundred and fifty places of worship, including those of the Church of England, Roman Catholics, Presbyterians, Congregationalists, Methodists, and Jews. The Synagogue on Hospital Hill has seats for fourteen hundred, and St. Mary's Hall, the English Church, is equally large. The town keeps the Sabbath and pays more attention to its religious observances than do most of our cities of the golden Rockies.

In the way of amusements, Johannesburg is far ahead of the typical city of our western highlands. Its athletic grounds cover more than thirty acres, including fields for cricket, tennis, bicycling, and golf. It has a race course where, summer and winter, handicaps are run for purses of from seven to ten thousand dollars, and where there are four race meetings of three days each every year. There is also a race course at Auckland Park, and one-day races

are held periodically throughout summer and winter. The people are interested in aviation and the city has its aërodromes.

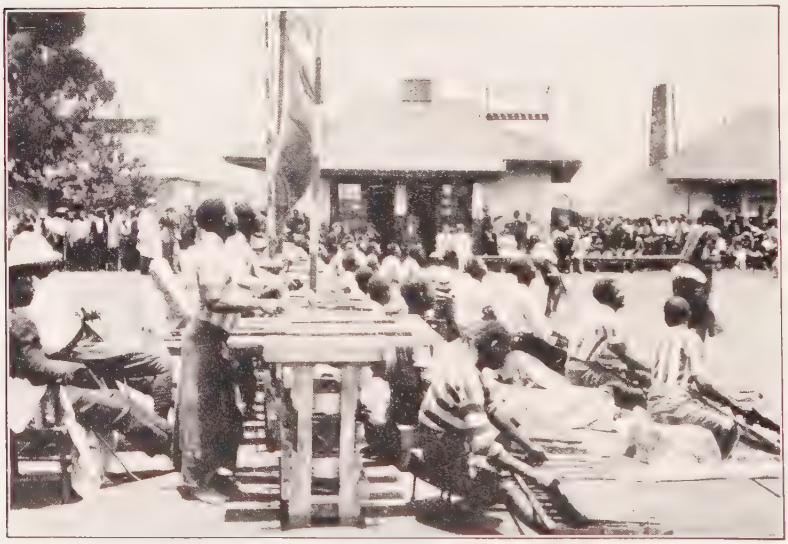
As to the sporting clubs, they number a dozen or more. In addition, there are many clubs for cricket, tennis, golf, football, and bowling. There are swimming clubs, and in Ellis Park the open-air swimming baths are used all the year around. The town has a recreation concert hall that seats twenty-five hundred. Like the Australians, these British South Africans pay more attention to fun than we do. No business is ever done on Saturday afternoons, when the people go to the races, the club grounds, and the athletic fields.

One of the most interesting features of Johannesburg is the natives. The city has the peculiarity—for Africa, that is—of being more than half white. Nevertheless, its Negroes number more than one hundred thousand. Among them one sees Basutos, Bechuanas, Zulus, Portuguese East Africans, and the other black peoples of southern Africa. These Negroes are not allowed to vote, and they do little else than work for the whites. They have few rights in comparison with those enjoyed by our coloured population. In going along the streets, the Negroes formerly had to keep off the sidewalks and walk in the middle of the roadway or along the edge of the curb, but in recent years they have been allowed to walk among the whites.

About the only municipal positions open to the blacks are on the police force, where they serve under white officers. The black guardians of the law carry clubs that are more like shillalahs than the batons of our police at home. Now and then one sees a Negro driving a motor-

Johannesburg, which once had so many galvanized iron houses and stores that it was called the "tin town with a golden cellar," is to-day the largest African city south of Cairo, and has public buildings that compare favourably with any on the continent.

"I rode about Johannesburg in a vehicle that still competes with the motor taxi—a jinrikisha drawn by a Zulu boy with painted legs, bells on his knees, and a headdress of cow's horns."



Halfway between savagery and civilization, the Negro miners of the Transvaal sometimes entertain themselves and the whites with native dances, to the accompaniment of batteries of xylophones.

car, and many of them also find employment as jinrikisha men. That mode of conveyance, however, is passing from general use, and many of the jinrikishas are now used as push carts.

The ricksha men are usually Zulus, who wear breeches that reach halfway down the thigh, leaving the lower part of the legs bare. We occasionally see also Zulus from the country strutting about the streets. These men dress their hair in great rolls, often extending a full foot above the crown of the heads. Those who are chiefs in their native villages wear rings around their heads, twining the hair over them and then smearing it with charcoal and oil so that it looks as if it had been polished. It is a great insult to attempt to pull off a man's ring. Not a few of the Zulus have cow horns so fastened to their heads that they seem to have grown there, the roots of the horns being hidden in the wool. This headdress is found also in Natal, where a young man goes out to court his sweetheart so adorned.

As in most mining districts, there are a great many more men than women in Johannesburg, and most of them are bachelors who have come here to seek their fortunes. "Joburg," like any other gold mining town, has been a magnet for all sorts of people, including prospectors, fly-by-night speculators, adventurers, capitalists, crooks, and swindlers. In restaurants and on street cars, and even in barber shops, one hears always talk of gold, gold, gold. It is the ambition of every one of the population to have a stake in the treasure in the reef, and breath-taking tales are told of how this or that man made a fortune on a "shoestring." Because Johannesburg is so largely dependent upon a single source of wealth, it is subject to booms and

depressions, periods of unemployment and falling values alternating with shortages of labour and sky-high prices.

In the early part of 1922, during the great strike of the Rand miners, the city was practically in a state of siege. The strike originated in the refusal of the coal miners to accept a cut in their wages, and spread quickly to the workers in the gold and the diamond mines. For ten weeks productive operations ceased completely in the Transvaal gold mines. The revolt was put down by government troops only after much bloodshed and loss of life, and was followed by a general reorganization of the whole mining industry in the Transvaal. Adjustments were made in wage scales, and new and more economical methods of operation were put into force.

In times of depression many whites would be glad to go into the mines at Kaffir's wages, but the trades unions and public sentiment are against it. There is a strong prejudice here against the white man doing what is considered black man's work. There are about six times as many blacks as whites in South Africa, and the latter feel that they must keep up their standing as the superior race. Therefore, here in a land that produces more gold and diamonds than any other part of the world, one often finds a large number of reduced gentlemen down "on their uppers" and half starving, rather than accepting jobs that would place them on a level with the native labourers.

Johannesburg, like other towns in South Africa, is not a place for any one without capital. The country is well supplied with clerks and men who have little more than their muscle to sell. The field for specialists, such as mining and mechanical engineers, is good, provided they have contracts before they come here, or have made a

reputation in local enterprises, but this city is not one to come to in the hope of finding a job.

The situation in which these people of Johannesburg often find themselves makes me think of Tantalus, who was condemned to stand up to his chin in the water under a tree loaded with fruit and see fruit and water retreating every time he sought to satisfy his hunger and thirst; or of the poor little boy whose face is pressed against the glass of a store window as he hungrily eyes the sweetmeats within. Johannesburg is surrounded by gold bedded on gold, and has gold extending for thirty miles on each side of it. It is pouring out hundreds of gold dollars every minute. Nevertheless, many of its people are poor, most of the treasures they take from the earth go to the stock companies of Europe, and men who are rich to-day may be "dead broke" to-morrow.

CHAPTER XXVIII

ON THE RAND

TAKE out your watch, hold it to your ear, and listen to the ticks. For every one of them more than five dollars' worth of yellow gold is now coming out of the great Rand mines under my feet. The stream continues second after second, minute after minute, hour after hour, day and night, all the year through. The output of the mines is now more than three hundred dollars a minute, about twenty thousand dollars an hour, and more than four hundred thousand dollars a day.

In all history there has been no such golden flood as that poured forth from the Transvaal. The mines of Croesus and of Solomon were small beside it. The treasures of Mexico and Peru in the time of Cortes and Pizarro dwindle in comparison, and Australia, Alaska, and California have had nothing like unto this. The mines of the Transvaal, which were discovered less than fifty years ago, have already turned out more than three thousand million dollars' worth of bullion, and are now producing nearly half of all the gold in the world.

More than this, the Rand mines, particularly those of the area known as the Far East Rand, promise to continue yielding gold for a long time to come. They could produce twice and even three times their present yield and keep up that output for years. The reefs in which the

precious metal lies have been prospected for a length of more than sixty miles, and experts say that they can be profitably worked to a depth of six thousand or even seven thousand feet. If the workings are extended down only four thousand feet, the amount so far taken out would be still but a small percentage of the whole.

Production has been increasing by leaps and bounds ever since gold was first mined here. In 1884 the output was worth about fifty thousand dollars; ten years later it had jumped to thirty-eight million dollars. The annual production at the beginning of the Boer War was around eighty millions. In 1905 it reached one hundred millions, in 1906 it was more than one hundred and twenty millions, and now this vast sum has increased to around two hundred millions. The mines suffered a period of depression during and after the World War, when the high cost of production and the world-wide inflation made it unprofitable to get out the gold.

I almost despair of describing these caves of Aladdin on the highlands of South Africa. They are not like any mineral region of North or South America, and I doubt if they have their counterpart on the face of the globe. There are no visible indications of minerals in this half-desert country. The gold is found in several great reefs of rock running through a range of low hills for a distance of about a hundred and twenty miles. The land is a mile or more above the sea, and these hills rise from one hundred to three hundred feet above the surrounding area. Beginning at the surface, the reefs slope down regularly into the earth. Between them, like the filling of a great sandwich, is a blue conglomerate of white quartz pebbles embedded in a cement impregnated with iron and gold.

The gold is in crystals and flakes so small as to be invisible to the naked eye. The whole reminds me of a raisin pudding; the pebbles are the raisins, and the cement-like rock that holds the mass together is the "dough." Our slang term for wealth was never more applicable than it is in describing this gold-bearing conglomerate.

The gold-bearing strata rest upon granite. The gold is supposed to have been deposited by streams in sand and clay, which in time was turned to cement and subsequently thrown up by volcanic action into the tilted ridge that now forms the southern watershed of this continent. It may be that the gold was once contained in a mighty sea just as the waters of the ocean still show traces of the yellow metal. Some scientists assert that there is about forty million dollars' worth of gold in every cubic mile of sea water. If that is true it would take only a little more than four cubic miles of the ocean to produce the yearly output of the Rand.

But let me tell you of my trip over the reef and down into one of the mines. Taking the train at Park station, Johannesburg, I was soon flying by the great works. I could see the black smokestacks, and could have thrown a stone into the great hills of dazzling white sand that are left near the mines after the gold has been extracted. On each of these hills cars are always crawling up and down. Some of them are attached to steel cables that bring the refuse for several miles, automatically dumping their loads on the top of the hill and crawling on without stopping until they are back at the works ready to be filled up again.

Think of a range of sand hills, the material of which is as fine as that used for scouring floors or ships' decks.

Let it rise right out of the green hills and extend on for forty-odd miles, and you have some idea of these enormous waste piles that have come from the reef. Remember as you look at it that every grain of that sand was once part of gold-bearing rock, from which hundreds of millions of dollars' worth of metal has been extracted.

The train stopped every few minutes, and every stop meant another mine. The only one I visited was the Simmer and Jack, which covers a huge gold-sprinkled territory within a half hour's ride of the city. When operated to capacity, it employs between five and six thousand men in three shifts, day and night, all the year round. As in all the mines of the Transvaal, its machinery is equal to the finest used in America. It has three hundred and twenty stamps that work day and night, crushing the ore for the mercury plates and cyanide vats.

The manager of the underground workings in the Simmer and Jack is a California engineer who has been in Africa for some years. Upon my telling him that I wanted to go all through the mine, he said that there were sixty miles of tunnels and underground passages, so I asked him to show me as much as he could in one day. Donning miners' clothing, we entered a great skip, or bucket, which had just brought up two tons of ore. A signal from the engineer sent us dropping down into the darkness, and another signal stopped us at the nine-hundred-foot level below the surface. There we left the skip and walked through tunnel after tunnel, now and then stopping to look down the incline.

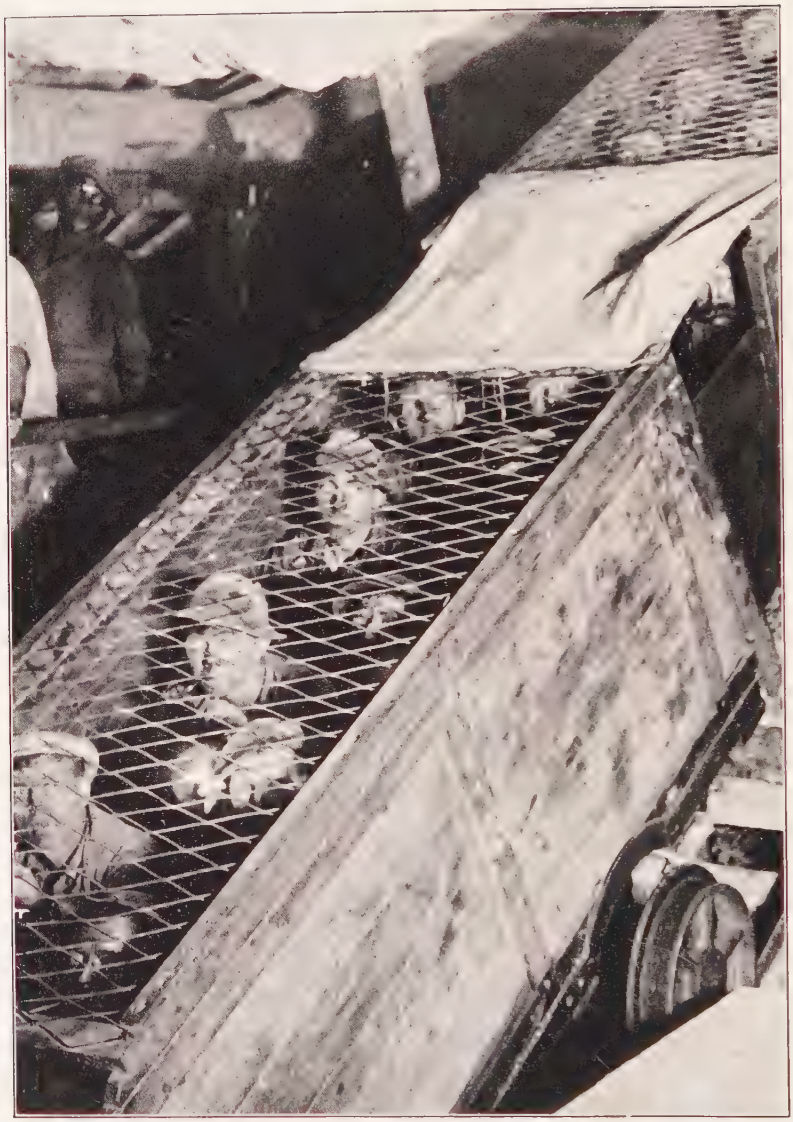
The gold-bearing rock in the Simmer and Jack slopes from the surface at an angle of forty-three degrees, and extends down to no one knows what depth. The holding

is more than a mile long and on the slant four fifths of a mile wide. The mine itself is a vast, low-ceiled cave carved out of the rock, just high enough for a man to stand upright within it. Along the slope I saw scores of natives drilling holes for blasting. They were bare to the waist and sang as they worked. These men are paid by the number of inches of hole drilled, the average being fifty inches or more in a day. At certain hours charges are put in the holes and scores of blasts are set off at once. After this the ore that has been loosened is shovelled into the cars in the tunnels below. It is then carried up the shaft and on to the stamps that crush out the gold.

This great underground cave is so sharply tilted that we had to hold to a chain or rope as we crept along, and a slip would have sent us rolling down over the rocks for hundreds of feet. The blasting frequently cracks the walls, and masses of rock sometimes fall down into the tunnels. There are always cars whizzing along, the ore rolls down the inclined planes, and rocks weighing hundreds of pounds are hurled this way and that. At first it was the practice to leave pillars of rock to support the roof, but now wooden cribs filled with large lumps of waste rock are used more and more. It was found that the rock pillars were liable to burst suddenly and fly all over the place. Before visitors enter the mine they are required to give a pledge that no action will be taken against the company in case of injury during the journey.

The air in the lower depths of the Transvaal mines is not nearly so hot as in most deep shafts in the earth. The temperature here is found to rise only one degree Fahrenheit for every two hundred and fifty-five feet of vertical depth, while in mines elsewhere the temperature some-

While Johannesburg has many fine homes set in attractive grounds, every landscape is marked by the white mountains of tailings, the waste rock left after the gold has been extracted from the ore.



How the ledges of gold-bearing quartz are tilted in the earth is shown by the sharp angle at which the miners' cages and ore cars follow the slope down into the underground workings.

times goes up four times as fast. When the bottom workings of the Brakpan and the Jupiter mines in the Transvaal were forty-four hundred feet from the surface, the rock temperature was only eighty-two degrees Fahrenheit.

The advantage to the underground labourers of a comparatively comfortable working temperature is offset, however, by the menace of tuberculosis, caused by the rock dust from the drilling getting into the miners' lungs. At one time twenty-six per cent. of the underground men in the Rand mines were found to have this disease, but this proportion has been greatly reduced by spraying the dusty air with water, and by better ventilation. Samples of the mine air are now regularly tested, the lungs of the workers are X-rayed every few months, and the men are also inoculated with pneumonia serum. The mine owners pay a special tax to provide a fund for compensation for employees suffering from tuberculosis.

But let us go to the surface and see what is done with the ore. As it comes out of the mine it is in lumps of all sizes, some as small as my fist, and some larger than a half-bushel measure. The rock is a bluish colour, and looks much like the limestone we use for road building. There is not a glint of gold to be seen anywhere in it. The lumps are first sorted by machinery, so that the larger pieces may be broken before they go into the crushers. They are then ground up in machines much as our grandmothers ground coffee.

After the ore is sufficiently crushed it is put through the stamping machines to be pounded to dust. These stamps are great bars of steel that incessantly pound the gold-bearing rock with a noise like that of the cataract at Vic-

toria Falls. The din is so terrific that the workmen have to stop their ears with cotton to keep from losing their hearing, and I found myself clapping my hands to the sides of my head to shut out the noise.

When the rock comes from the stamps it is so fine that it will pass through a wire mesh with holes not much larger than the point of a needle. It is then carried by water over tables covered with mercury, which catches the gold but allows the sand to flow on. After this the refuse is treated in a bath of cyanide of potassium and water, which takes up any gold that has escaped the mercury. The processes are practically the same as those used in our great mines of the West.

In fact, the experience of our own American mining experts had much to do with developing the Rand mines. When gold was discovered in the Transvaal there was a sort of American invasion, headed by such mining engineers as Hennen Jennings, H. C. Perkins, Captain Thomas Mein, and John Hays Hammond. The American mining engineers of the 'eighties and 'nineties were in a class by themselves, since the opening of the California gold fields had given them a much wider experience than was then possessed by the experts of other countries, and they had developed new processes of treating ore. Hence, when Cecil Rhodes and the famous Barney Barnato cast about for competent men to develop the South African mines, they naturally looked to the United States.

The first mines in the Rand being in outcrop rock, the ore was oxidized from having been exposed to the air and the gold was readily freed by the use of mercury. But when the outcrop was exhausted, it was found that the unoxidized ore beneath the surface held the gold so tightly

that mercury alone would not free it all. The mine owners in this part of the world had never used what is now known as the cyanide process for extracting gold under just such conditions. They became discouraged, and a slump followed. Then Hennen Jennings, who had heard of the process, insisted that it be tried here. It was a great success and is the method in general use on the Rand to-day. In the same way, John Hays Hammond started deep-level mining when many of the mine owners, seeing that the outcrop indications had disappeared, thought the field was exhausted.

American machinery, as well as American methods, is used largely in the Transvaal. In one year the Rand bought fifteen million dollars' worth of new engines, drills, and other machines. A great deal of this equipment was sent from New York to Southampton and thence down to Cape Town.

No new mine is started until the ground has been tested by a "bore-hole" drilled through the rock sometimes to a depth of four thousand feet. This drilling is done with a disk studded with rough diamonds, which cuts its way downward with a rotary motion, carrying the core inside it. The drill is raised from time to time and the core is examined for indications of gold. There are no British drills at work on the Rand, all that are used being bought from the United States. Formerly we sold also great quantities of picks, shovels, and underground rails to the mines. This market has now been largely captured by the steel makers of Sheffield and Birmingham.

I was much interested in the assaying laboratories of the Simmer and Jack. The ore has to be tested again and again to find out just how much the mine is producing.

Indeed, something like a thousand different assays are made every day. A very small amount of ore is used, and a little lead added. From each sample comes a button of lead and gold about as large as the end of my thumb. By roasting the button in bone ash the lead disappears and only a speck of gold remains. It is often not bigger than the point of a fine needle, but the weighing machines are so delicate that the assayers can easily tell just how much precious metal there is to each ton of ore thus sampled.

Before leaving, I told the assayer that although I had spent a whole day in the Simmer and Jack, had been told again and again of the millions of dollars' worth of gold it was producing, and had seen thousands of tons of ore alleged to be sprinkled with gold, I had yet to catch my first glimpse of the yellow metal.

"If you have any doubts as to the reality of the gold here," said the expert, "I can dispel them by showing you some bricks that we are just about to ship to London."

With that he took me into the rear room of his tin-roofed assay office, and with a twist of his wrist opened a door in the wall. He touched an electric button, swung a combination lock around about five times, and threw open a safe, out of which he pulled a big brick of pure gold. He dropped it on the counter and asked me to lift it. I tried to do so and failed, although I might have been able to had the brick been lying on the floor instead of at the height of my waist. It was a solid lump of bright yellow metal, shaped like a paving brick and perhaps two inches thicker. Putting it on the scales, the assayer showed me that it weighed more than seventy pounds. He said that its value was one hundred and eighty thousand dollars. In the same vault I was shown other bricks

American mining engineers are given the chief credit for developing the processes by which the mines of the Rand are operated at a profit, and for years some of the properties were under American management.

Although the white man stripped the Zulu chiefs of their despotic power, and stopped the wars they waged against rival tribes, they still retain great influence over their people, who are physically and mentally a superior type of Negro.

that all together were worth more than one million dollars.

Much of the gold goes by train from here to the port of Durban, on the southeast coast of Natal, and thence by mail steamer to Southampton. Each brick is packed in a separate wooden box, which is bound around with strap iron and sealed. The banks have charge of the shipping, and the railways are responsible for the gold from here to the port. Sometimes as many as twenty-five of these bricks, worth about four million dollars, are shipped in one day.

Before the Boer War there were more than one hundred thousand natives employed in the gold mines. This number dropped to almost none during that struggle, while the high wages then paid by the armies so disorganized the industry that when the war was over and the mines opened up again, the shortage in the labour supply was thirty thousand or more. It was then that the possibility of getting Chinese was discussed and, as a result, celestials were brought here by the shipload.

The first of these orientals came in July, 1904, and by the close of that year twenty thousand almond-eyed, pig-tailed workers were labouring in the mines. Later about thirty or more steamer loads were brought in, and the total invasion amounted to sixty thousand or more. But the experiment proved so unsatisfactory that by 1910 the last Chinese had been sent back to his own land and the gold-mining industry was again largely dependent upon native labour.

The total number of blacks now at work in the mines of the Rand is close to two hundred thousand, or about ten times the number of white men employed. The Negroes furnish the unskilled and semi-skilled labour, while

the whites have charge of the gangs of natives and the complicated machinery, and are in general the aristocrats of the job. Their wages are much higher than those of the Negroes. They are strongly organized in unions, and are united in opposing all attempts of the companies to train the blacks to do any part of the work now performed only by white men. The mine owners, on the other hand, are anxious to reduce labour costs by having as much of the work as possible done by the lower paid Kaffirs.

The Rand could not have become the richest gold-producing area in the world but for the fact that cheap coal, suitable for power purposes, is to be had in plenty in the same district. Ninety-seven per cent. of all the known coal deposits on this continent are within the Union of South Africa, and about sixty per cent. of the output comes from the Transvaal. On the Far East Rand the gold reefs are actually overlaid with coal, and it would be possible to take out both minerals from the same shaft. It is roughly estimated that thousands of millions of tons are available, and already, besides producing all the coal for her mines, her railroads, and her rapidly developing factories, the Union is exporting it to East Africa, India, Argentina, and other parts of the southern hemisphere, while her ports do a big ship-bunkering business.

CHAPTER XXIX

A BRITISH CAPITAL IN THE LAND OF THE BOERS

FORTY miles east of Johannesburg is Pretoria, capital of the province of the Transvaal and seat of the administrative government of the Union of South Africa. It was formerly the headquarters of the Boer government, the home of President Kruger, and the heart of resistance to the British during the Boer War. The only signs of that struggle that I see here now are some dismantled forts, an occasional monument put up to the soldiers, and the square stone block houses that were erected to guard the railroad between here and Johannesburg.

The city lies in a valley formed by a small tributary of the Crocodile River, and is surrounded on all sides by green hills. The streets are wide and well paved, and in many places are shaded with willows that were originally set out as fence posts. Nearly every house has a yard about it, and the whole city seems almost to be a great garden of trees and flowers.

Pretoria's population of more than forty thousand whites is now composed of both English and Boers, some of whom have inter-married. Railroad time-tables are printed in English as well as South African Dutch, and the two languages are taught in the schools, but Pretoria is still more Dutch than English. There are Dutch signs over many of the stores, some of which sell books printed in that language. As I go along the streets I hear the

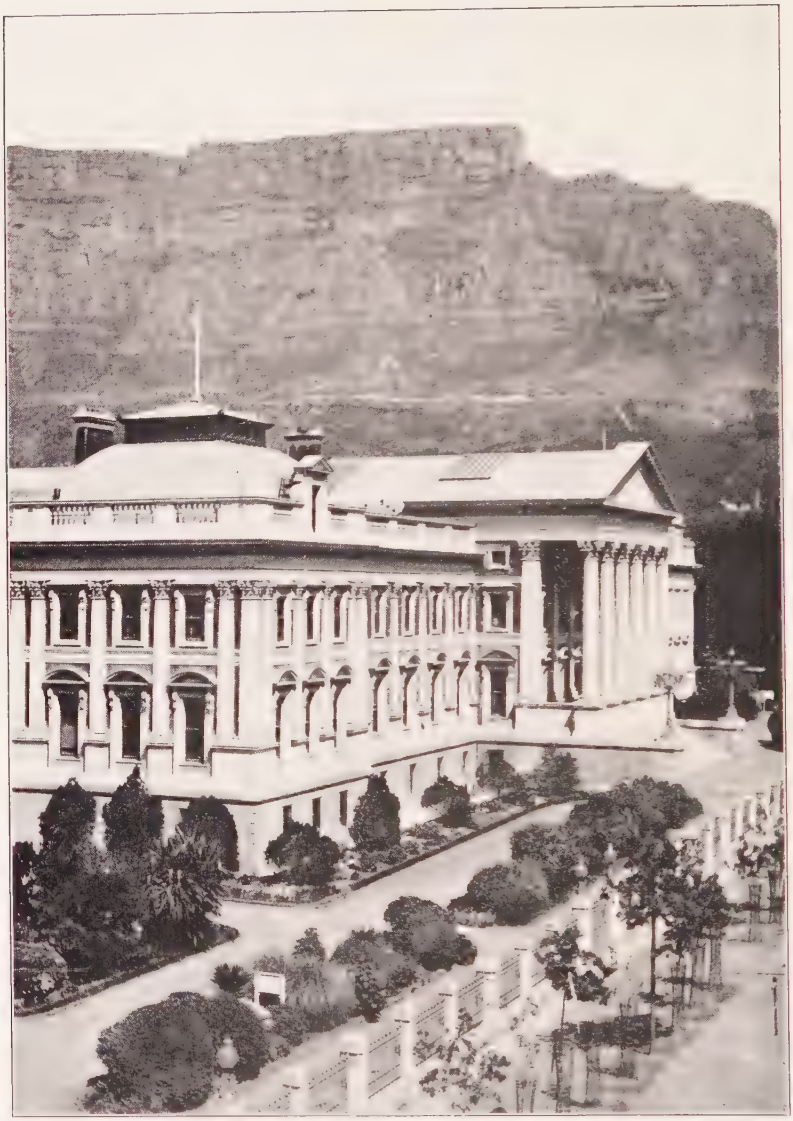
people talking Dutch, and the rural population in the surrounding country about is almost entirely Boer. The Dutchmen's long teams of oxen may still be seen occasionally going through the city or standing in the market places just as they did when this was the capital of African Holland, although the automobile is now everywhere in evidence.

In fact, the automobile and the motor truck have found their way into the remotest corners of the Union of South Africa, and are used on roads that a few years ago were thought impassable for everything except an ox wagon or a stout Cape cart. The American car easily leads the market. Nearly every village in the South African states that is not near a railroad now has a motor service to and from the nearest station, while motor mails have almost entirely replaced the old post carts. The four hundred and eighteen miles from Johannesburg to Durban, the principal port of the Union, and the six hundred and fifty-eight miles from Port Elizabeth to Cape Town, have both been covered by automobile in less time than that taken by the mail trains. Many travelling men now make their rounds by automobile even through the back country, frequently carrying heavy samples with them. Nearly every farmer of means has his own car.

Everywhere about Pretoria I find reminders of Oom Paul Kruger, the famous Boer president. I visited the Dopper Church, where he sometimes preached, and went one afternoon to see the house where he lived. It is an unpretentious one-story building with a garden behind it. The front door of the house opens almost directly upon one of the principal streets, and here each day from daylight to dark the old Dutchman kept open house to every

Formerly the headquarters of the Boers, Pretoria is now the administrative capital of the British Union of South Africa. Most of the government offices are here, but the Parliament meets in Cape Town.

Durban, the chief city of Natal, is not only the leading port in the Union, but is noted also for the beauty of its harbour, its bathing beaches, and its yachting and boating clubs.



The Parliament House at Cape Town, situated almost in the shadow of Table Mountain, is the scene of many hot political battles between the representatives of labour, the mining interests, and the farmers.

one, serving coffee to all who called upon him. He now lies buried in a little cemetery near by.

During the Boer War it was often said that Kruger was very rich and that he sent millions of dollars to Holland for safekeeping. The truth seems to be that the Boer president came out of the war comparatively poor, as far as money was concerned. His wealth had been chiefly in farm lands, which he had divided among his relatives before the war began. While the struggle was raging he loaned something like two hundred and fifty thousand dollars in cash to his government to keep the Boer soldiers in the field, receiving in return government notes, which were, of course, worthless after the war. He also loaned about seventy thousand dollars besides, which is said to have been in the hands of General Botha at the time the war ended. This was offered to the British, but they refused it, and the sum formed a part of the Kruger estate. The people here say that Kruger cared far more for his country than for his fortune.

The first president of the Dutch South African Republic was M. W. Pretorius, who founded this city of Pretoria in 1855. It was made the capital of the Transvaal in 1860, and it remained the chief Boer city until it was surrendered to the English during the Boer War in 1900. Ten years later it was chosen as the administrative capital of the Union of South Africa, which had just been formed by the amalgamation of the colonies of the Transvaal, Natal, the Orange Free State, and the Cape of Good Hope. The legislative capital is at Cape Town, where the parliament meets, and the governor-general divides his time between the two cities, maintaining an official residence in each.

The Union government buildings, which were erected between 1910 and 1913 about a mile from the centre of the town, are the handsomest structures in Pretoria. They overlook the city from a hill that has been called one of the finest sites in the world. In design all the buildings are of modified Grecian architecture. They surround an amphitheatre, and the central approach is through terraced gardens. As far as possible, only materials obtainable in South Africa were used in their construction. They cost nearly six million dollars, and provide accommodation for the offices of the governor-general, the prime minister and his cabinet, and more than a thousand officials. Broad roads and an electric car line connect them with the city.

From Pretoria the ministers of the Union govern a territory with a total area of nearly a half million square miles, or almost twice the size of Texas. The Union of South Africa occupies the whole southern end of the continent. At the west it extends northward from the Cape of Good Hope to the Protectorate of Southwest Africa, the former German colony that is now administered by the Union; at the east it stretches along the Indian Ocean for hundreds of miles to Portuguese East Africa. The Transvaal, in which I am now, is the northernmost state of the Union, Pretoria being almost a thousand miles from Cape Town. This province ranks next to the Cape of Good Hope in size and is about twice as large as Illinois or Iowa. Nevertheless, its white population is not greater than that of our city of Buffalo; including the blacks, who number perhaps three times the whites, there are not as many people as in Philadelphia.

Although more gold comes from the Transvaal than

from anywhere else in the world, and although the province has the greatest diamond mine on earth, this country, for all its vast stores of wealth, seemed small and poor as I travelled through it. I passed no cities of large size. The land was dry and comparatively barren, and some of it was almost desert. A large part of the province is covered with scrub; other sections are so scantily watered that the grass burns up in the summer season, from October to March.

The Transvaal is a vast tableland of great rolling plains, crossed here and there by low ranges of mountains. As much of it lies four thousand feet or more above the sea, the climate is healthful for white men. Nevertheless, a comparatively small part of the land has been taken up by settlers. The farms are few, and at times I rode for miles without seeing a house. Out of something like seventy-five million acres, only two million are under cultivation. About thirty million acres are used for grazing, the chief wealth of the country outside the mines being in its live stock.

Most of the land is held in large tracts of from fifteen hundred to six thousand acres. However, the owners usually cultivate only a small area, using the remainder for grazing or letting it out to the native Kaffirs in little patches of from one to five acres. The Negroes work their farms under the direction of the owner, and usually give him half the harvest. Their principal crops are corn and millet.

One of the chief pests of the farmer in this part of Africa is the locust, great swarms of which sweep over the country from time to time. They look just like our grasshoppers, and are probably the same sort of insects

as those that ruined Kansas and Nebraska crops some years ago. When they come they eat almost every green thing. The grass disappears, and the sheep and cattle perish for lack of food. I have ridden for miles through such swarms. At times they are so thick that they almost hide the sun. The air is filled with the sparkling white wings of the insects in flight, and one can see nothing but locusts as far as the eye can reach. I have seen the ground covered with them on both sides of the railroad track, and have watched the locomotive plow through them like so much snow. Sometimes the rails become so wet and slippery from the crushed bodies of locusts that the wheels spin around in one spot, and the track must be sanded before the train can go ahead.

During the periodical visitations of the locusts the government has offered as much as fifty cents for two-hundred-pound bags of the insects and twelve cents a pound for their eggs. The latter are laid in cocoons, and it is estimated that it takes forty thousand eggs to make one pound. Sometimes the eggs live for years before they are hatched, so that, although the adults may be killed off or driven away, new swarms may come forth again and again from the dormant eggs.

The law now requires that all farmers report the finding of eggs or the appearance of young locusts on their property, and that they do all they can to destroy the pests. The locusts are killed by spraying the vegetation around the swarms with a strong arsenic solution or by scattering food saturated with this poison. In one season nearly thirty-eight thousand swarms were thus destroyed, which, it was estimated, meant a saving of ten million dollars' worth of property.

The blacks are fond of locusts as a table delicacy, and I am told that the Boer farmers frequently use dried locusts as chicken feed, paying as much as two dollars a bag for them.

The government is now doing all it can to introduce modern farming methods in the Transvaal and to better the conditions of the farmers. It has established experimental farms at several places and is trying to improve the breeds of live stock. Many new plants are being introduced, experiments have been made in cotton growing, and the farmers are especially encouraged to raise tobacco, which, next to corn, is the most important crop. A number of American agricultural experts are employed by both the Union and the provincial governments as advisors. The first prime minister of the Union, General Botha, worked hard to stimulate agriculture. He said:

"Agriculture and mining are the two brothers of the Transvaal, and they must work together, hand in hand, for the benefit of the country."

The wisdom of such a policy for South Africa has never been disputed. The trouble has been, however, over its practical application, the Boers protesting that mining interests have been unduly favoured, while the latter claim that the farmers are so selfish that they would sacrifice the commercial and industrial development of the Union to promote their own welfare.

CHAPTER XXX

THE GREAT CULLINAN DIAMOND

ALTHOUGH Kimberley is the chief diamond-producing region on earth, the biggest single mine is the famous Premier, not far from Pretoria. From it came the Cullinan, the monarch of all diamonds in the world, and several times larger than any other ever found.

I am writing these notes on the edge of the Premier. From where I stand I can look right down into it, or rather over it, for it covers eighty acres, the area of a good-sized farm. On that hill at the left I can see the great gear, with its crushing, washing, and pulsating machines, fed by the caravan of cars now whizzing up over that inclined roadway.

The mine itself is black with workmen. Several thousand natives are at work digging out the blue clay and loading it on cars. Here men are blasting, there they are laying light railroad track, and farther over they are tunnelling down into the earth. At one end of the property are the offices where the managers direct the work. They are housed in an iron-roofed building worth less than two thousand dollars, which seems strange headquarters for a business that employs thousands of men and has an output of millions of dollars a year. Farther back are the compounds where the native workers are kept under

guard, while just behind me is the town of Cullinan, with its railroad station, its hotel, and its few stores.

The Premier mine is of the same formation as the Kimberley mines, except that its pipe is so large that all the De Beers mines could be put inside it and leave room to spare. The Premier pipe is a half mile long and a quarter of a mile wide, and the blue earth within it contains countless precious stones. Four years after it was opened more than nine hundred thousand carats of diamonds had been taken from it. A carat and a quarter diamond makes a very pretty engagement ring, and cut and set is worth several hundred dollars. You will have some idea of the value of the Premier when I tell you that in some years it has produced diamonds at the rate of a carat and a quarter a minute. The total value of the output has been more than one hundred million dollars, and it has often paid several millions a year in dividends.

The Premier mine began operations in 1902 but is believed still to be in its infancy as a diamond producer, the workings having extended down only a few hundred feet from the surface. When it is remembered that the Kimberley pipe has been mined to a depth of more than three thousand feet, that the De Beers is now more than two thousand feet deep, and that neither shows any diminution of the output of diamonds to the carload of blue earth mined, the enormous possibilities of this mighty pipe with a cross section of eighty acres can be appreciated.

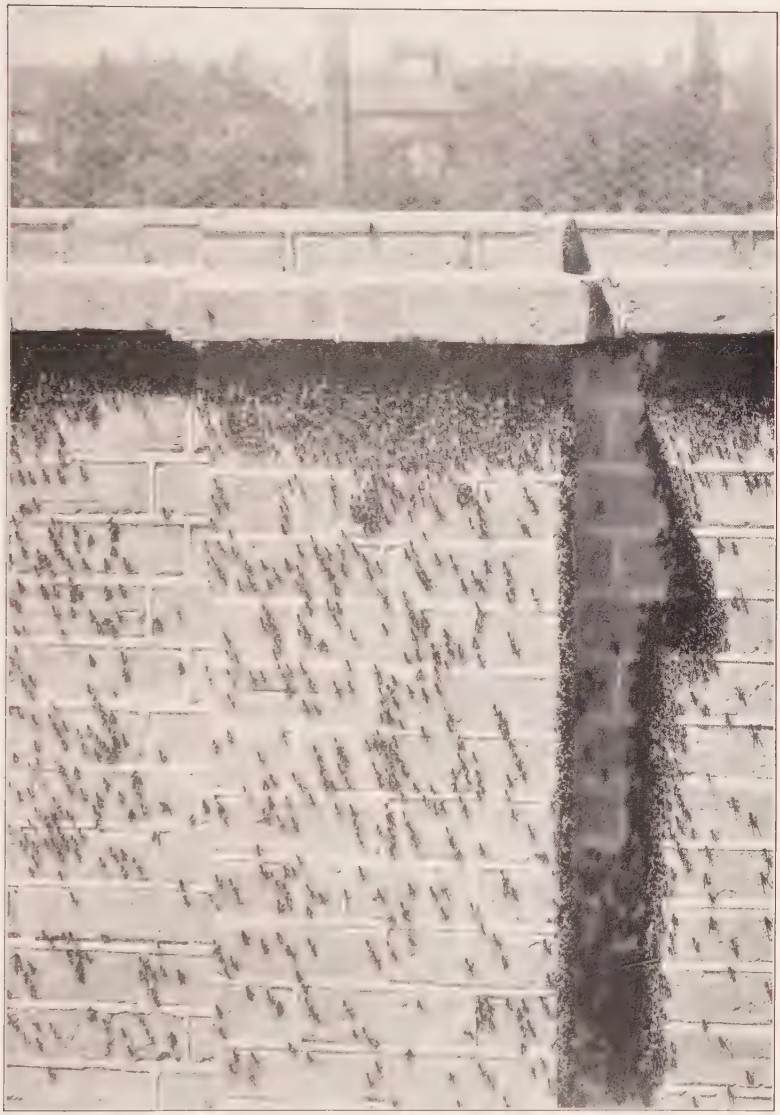
The great pipes of the De Beers Company at Kimberley had been worked for a generation before the Premier was discovered, and it was believed that they would always form the world's chief source of supply of these precious stones. Indeed, I understand that the De Beers Com-

pany rather sneered at the Premier mine at first, claiming that its diamonds did not compare in brilliancy with those of Kimberley. Later the greatness of the new diamond field was universally acknowledged, and finally the two companies entered into a working agreement by which the diamond output is so restricted as not to flood the market.

T. M. Cullinan, the man who discovered the mighty diamond pipe, and after whom the Cullinan diamond was named, had only a few thousand dollars in 1902. I am told that as a boy he was poor, and that he made some of his first money as a bricklayer and later as a contractor. A half dozen years after he opened the Premier mine he was worth millions.

Diamonds had long been known to exist in this region, and only a short distance from where the Premier now is an alluvial claim had been pegged out and capitalized at seven hundred and fifty thousand dollars. When Mr. Cullinan was first prospecting for diamonds in this valley, he found several promising leads that all seemed to go toward this point.

The property on which the Premier is located then belonged to a Dutchman, who had something like fifteen hundred acres of land. He was using it for stock raising and was renting out small patches to the natives about. Knowing of the possibilities of diamonds being found in the land, he held it for sale at fancy prices, although the whole tract had cost him only five hundred pounds. When Cullinan attempted to make a deal with him he refused to sell except as a whole, and for a lump sum of fifty-two thousand pounds, or about two hundred and fifty thousand dollars in American money. Mr. Cullinan had prospected enough to feel sure that the ground contained



Coming in great swarms that often darken the sky, the locusts descend in such numbers that they cover the ground and buildings. Grass and crops are destroyed, and cattle and sheep perish for lack of food.

The well-watered sections of the Cape province contain vineyards that yield millions of gallons of wine a year, and orchards from which fruit is shipped in cold storage to London during the winter season in Europe.

diamonds, and he had no doubt that the mine could be profitably floated, even at that price. Therefore, he put in all his money and induced others to join him in buying the farm.

Cullinan thought that there might be a diamond pipe somewhere on the property, but was sure that the land contained enough alluvial diamonds to repay the purchasers even if no pipe was discovered. However, in his wildest dreams he did not conceive of the biggest diamond mine of the world and of the discovery of the largest diamond ever known.

The Dutchman who had owned the property continued to live in a little mud hut not far from here. He afterward sold another farm, which cost him less than the first, for one hundred thousand pounds, so that all together he realized about eight hundred thousand dollars for his lands. Notwithstanding his wealth, however, I am told that he stuck to his mud hut.

The Cullinan diamond was really discovered by the mine overseer of the Premier on the 26th day of January, 1905. He had a gang of natives working at a depth of about five feet from the surface not far from the centre of the pipe, and had been taking out diamond-bearing earth all day. As the men were about to quit work, the overseer, named Wells, saw something white and sparkling lying on a slope of the blue earth. As the rays of the setting sun caught it, it blazed like fire. He seized a pick and rushed to the spot. The earth was already loose about the stone, and in a short time it was in his hand. It was so big that he was almost dazed at his discovery. He ran with it across the mine to the office, bursting in upon the manager and Mr. Cullinan, who were as much astonished as

he was. The stone was weighed, and the next day the news was sent out that the biggest diamond of the world had been found.

During my stay here I have seen actual size crystal models of the Cullinan diamond. The stone was about as big as my fist, or almost the size of a glass tumbler, and weighed more than one and a half pounds. It was about four inches long, two and one half inches thick, and about two inches wide.

The Transvaal government, which, according to the laws of this province, is paid sixty per cent. of the value of all the diamonds found here, purchased the remaining forty per cent. interest of the mine owners in the Cullinan diamond, and then made a present of the gem to Edward VII on the occasion of his sixty-sixth birthday.

It is interesting to know how this great diamond was taken to London. Think of the responsibility of carrying something so small that you could put it in your coat pocket, yet worth two million dollars or so, from Pretoria to London. It would be a brave man who would risk it without a guard, and if a thief could get hold of it, it might be easily smuggled away. Nevertheless, the diamond was sent to London as a registered package without guards of any kind save those of His Majesty's mails. No one knew what was in the package, and it was carried with less danger of theft than had it been guarded by soldiers. It was insured for two and a half million dollars, although the government received less than thirty cents for carrying it. At the same time, a dummy parcel supposed to contain the diamond was ostentatiously taken to Cape Town and thence to Southampton.

After its presentation to King Edward, the diamond was

turned over to the authorities at Scotland Yard and then taken to Holland to be cut in the great diamond-cutting establishment of Asscher and Company at Amsterdam. It was this firm, noted for its fine workmanship, that cut the Excelsior stone, the largest diamond in the world before the discovery of the Cullinan. It has handled the best of the uncut stones discovered in Africa during the last quarter of a century.

While in the possession of the Asscher people the diamond was kept at night in a special safe in the vaults of the establishment and guarded by Dutch police. The vaults had walls of cement and iron three fourths of a yard thick, and the door was an eight-inch plate of steel with nine concealed locks. The gem was taken from the safe every morning by the head of the firm, armed with a revolver, and accompanied by ten members of his staff, who left him while he secretly unlocked the door. The stone was then carried to the workroom especially built for the purpose and given over to a specialist, Henri Koe, who did the cutting and the polishing. He was locked in the room with the diamond and not allowed to go out even for his meals. The polishing was done with a paste of crushed diamonds and oil on a plate sixteen inches in diameter, which is four inches wider than that used for ordinary stones.

Nine large diamonds and ninety-six smaller ones were cut from this great jewel. The largest, a pendant-shaped stone, weighs five hundred and sixteen and a half carats, the greatest cut stone known. Mounted in a removable setting, it blazes in the royal sceptre of Great Britain, while a sister diamond, the Cullinan II, sparkles in the imperial crown.

CHAPTER XXXI

AMONG THE KAFFIRS

THERE is always a great deal of anxiety among the white people in South Africa over the Negro question. In the United States we have one Negro to every nine or ten whites. Here the proposition is almost reversed. There are nearly four black men to every white, and the blacks are beginning to appreciate the possibilities of this situation.

I have seen Negroes in all the cities of South Africa I have visited. They wear European clothes, and those in the crowds one sees about the stations are as fully clad as are the Negroes of our small Southern towns. In many localities they are beginning to resent their treatment by the whites, especially the laws or local customs that keep them off the sidewalks in certain cities.

As early as soon after the Boer War, the leaders of a sect known as the Ethiopian Episcopalians were at work in Natal, Cape Colony, and the Transvaal. Their pastors preached the equality of the races, and urged them to stand up for their rights. Moreover, the unrest following the World War bred other religious sects based on the proposition that the coloured race is not inferior to the white. Among the leaders in the race agitation are Negroes from the United States and native South Africans educated in America and England. This fact has been used as an argument in favour of providing the Negroes

The natives of the Transvaal raise Kaffir corn on the little fields of from one to five acres that they rent from the whites, who hold much of the land in tracts of several thousand acres.

Although the blacks are beginning to acquire an elementary education, and to demand more of the whites, there is no doubt that for generations they will be limited chiefly to the rough labour of the country.

with facilities for higher education in South Africa, on the ground that such action is preferable to having him acquire in foreign countries ideas not in harmony with present conditions in South Africa. In the contemptuous treatment of the black by the mass of the white population there is little distinction made between the university-bred native and his barbarous Kaffir brother. Lord Selborne, under whom the Union was established, was a great believer in Cecil Rhodes' idea of "equal rights for all *civilized men.*" Some years ago he thus summed up the position of the blacks in South Africa:

"In some places a native, however personally clean he may be or however hard he may have striven to civilize himself, may not walk on the pavements of the public streets; in others he is not allowed to go into a public park, or pay for the privilege of watching a game of cricket; in others he is not allowed to ride on top of a tram car, even in specified seats set apart for him; in others he is not allowed to ride in a railway carriage except in a sort of dog kennel; in others he is unfeelingly and ungraciously treated by white officials; in others he may not stir without a pass . . .

"In an extreme case, he may have to conform to no fewer than twenty different pass regulations."

The situation of the blacks has been considerably improved in many respects since Lord Selborne made the above statement, but there are still great differences in the treatment of the natives in the several provinces. In the Cape province, where Cecil Rhodes' idea prevailed, the educated native with property has the vote, and in several cases educated blacks in certain specified occupations are exempted from the pass regulations and payment of certain

taxes. In Natal, the problem is not so much what to do about the Kaffirs as how to handle the thousands of East and British Indians who clamour for suffrage. It is in the centres of industry in the Transvaal and on the Rand that the whole matter of the "colour bar" is most troublesome. Many of the white workers are strongly unionized, especially in the mines. The trade unions bar the Negroes from membership and oppose their rise in the scale of work or wages. By the rules of the mine workers' union, seven whole groups of industrial positions are forbidden the blacks, and all skilled labour is kept in white hands. From the mine owners' standpoint the question is largely one of getting out the gold and diamonds as cheaply as possible, so every now and then they try to increase the proportion of blacks in their mines. This always causes more trouble between the white unions and the natives.

All kinds of unskilled labour is looked down upon by the whites, even the newest immigrants. I heard to-day a story of a young cockney Englishman recently arrived at Kimberley. When directed to load some bricks on a wagon, he scornfully refused. It was pointed out to him that he had done exactly this kind of work at home, but he said that he wouldn't do it in South Africa, for it was "Kaffir's work." Here the white man feels he must be boss and overseer if he is to keep his supremacy over the inferior race by which he is outnumbered four to one. There are on record cases where white men have consented to work for prosperous blacks, but only on condition that the Negroes should call the whites "Boss." Take, for example, a painter going to work in the Transvaal. He strolls forth with one native carrying his paint pot, an-

other bearing his brush, and a group of black followers to prop up his ladder and wait on his minor needs. White men here who could not afford a single servant in Europe or America often have two or three natives to look after their wants.

For many years most of the education of the Kaffir has been in the hands of the missionaries, but the governments are now providing and aiding more native schools. There are now nearly six million blacks south of the Zambesi, but their school children number less than three hundred thousand. In the Cape province their education is carried on largely by the mission schools, which are helped somewhat by government grants and are under government inspection. The Negroes have to pay fees that cover a large part of the cost, and in some districts they have given money for building schoolhouses. The government grants are about one third as much per pupil for the natives as for the whites, and the education given them is but little more than the three R's.

The Kaffirs of the city are fast coming to the realization that schooling pays, and they are now anxious that their children should learn. A Johannesburg merchant told me of a Kaffir tenant of his who was educating his sixteen-year-old daughter. He was asked why he did so and replied that he had noticed that the white man was of little value without an education, and, if so, why not the black man? He said that he did not know that his girl would teach school, but that he was bound she should have a chance to learn.

After many years' effort the missionaries have succeeded in organizing the South African native schools, but as a rule the people would rather keep the blacks uneducated.

Most of them look upon the natives as hewers of wood and drawers of water provided by God, and they want them to continue so. They do not want the Negroes to own real estate or go into business, and throughout the Union it is forbidden by law for a native to buy land from or sell it to any white. The mechanics and the foremen, among the whites, would rather not have the blacks learn trades, as they desire to keep the labour of the two races distinct.

As to the co-education of the races, there is only one place in South Africa where that is carried on to any extent. This is at Lovedale, in the Cape province, about six hundred and fifty miles northeast of Cape Town. In the missionary training institution of the United Free Church of Scotland at that place, whites and blacks are educated together. It is a sort of boarding school with something like seven hundred pupils, mostly natives. It might be called an academy, although it has all the grades from kindergarten to a normal training school. This school is turning out teachers and native preachers. Many of the teachers of the mission schools throughout South Africa have been educated there, and it has done much in bringing its European pupils to an understanding of the native character.

The institution consists of a large central building, a score of dormitories, many workshops, and a hospital. Connected with it is a farm on which the boys work. All sorts of manual training are taught. The morning hours are devoted to study and recitations, and a part of each afternoon to work upon the farm and in the gardens and the shops. The school has its military drills and physical training. It has a brass band, and the white and the black boys play cricket together. Every Friday evening

The world's greatest source of ostrich plumes is the province of the Cape of Good Hope, with its three quarters of a million birds, yielding more than a million pounds of feathers annually.

The male ostrich is as devoted a parent as the female. He selects the place for the nest, sits on the eggs whenever his wife wants to rest, and at hatching time helps break the shells for the chicks.

the literary society meets and there are occasional lectures, papers, and debates. The girls learn dressmaking, cooking, and laundering during their stay. It is not difficult for a Lovedale graduate to get a job. Many of the former students are now employed as interpreters, some are clerks in the government offices, while others find places in the stores. Such an institution, however, does not represent the attitude of either the government or the people of South Africa.

In Kimberley and Johannesburg, the great centres of the gold and the diamond industries, natives are now paid about fifty cents a day. This is considered an enormous wage for a black in this part of the world. Only a generation ago natives were paid but three cents for ten or eleven hours' work. Then an ax would buy an ox and a string of glass beads would pay a Negro for carrying a load of seventy pounds a hundred miles through the wilds. Such low wages still prevail in parts of Uganda, Kenya Colony, and Tanganyika Territory, and the white men there will tell you that it is wrong to pay more.

I remember a conversation I had with a government official of British Central Africa. We were talking about the native labour, and I asked whether it was possible to get any work out of the blacks of Nyasaland. He replied:

"Yes, we get some work from them, but both the government and private individuals are spoiling the labour market. The African is mentally a great big child. He ought to be treated as a child and be punished when he is bad. It used to be that the officials had such power that if a native did not obey his master he was brought up for punishment. He was then laid down on the ground and given ten lashes or so with a hippopotamus whip.

This hurt him somewhat, but he took it as a matter of course and did better thereafter. Now the laws are such that we can only imprison him for small offenses, and we have to try him before we can give him corporal punishment.

"As to labour," this man continued, "the Negro works all right if you do not raise his wages. When we first entered British Central Africa he was satisfied with a shilling. Then we gave him three shillings, and now that private parties have come in and are building a railroad, they want steady labour and are offering six shillings."

"Six shillings? A dollar and a half a day?" I asked.

"No, six shillings a month. It is too much, and the worst of it is that the native will expect those wages right along and he cannot see why he should not have it. It is a great mistake."

"A dollar and a half a month is five cents a day," said I. "That does not seem much to me. And even out of those wages I suppose the natives have to pay taxes."

"Yes, we collect six shillings a year from the well-to-do and those who have the cash, and we make all others give us a month's work on the roads or bring a certificate from their employers showing that they have done work to the amount of three shillings each, when their taxes are remitted."

"In other words, every black man must give one month of every year to the government," said I.

"Yes, it amounts to about that," was the reply.

In South Africa the natives are charged a hut tax of from ten to fifteen shillings, and also have to pay dog taxes and wife taxes. Every time a man is married he pays a fee to the government, of which a portion goes back

to his chief. In one year the natives of Natal paid eleven thousand dollars in marriage fees, and I am told that a black man has to pay twenty-five dollars to the government when he gets a divorce. The hut taxes of the Cape province are about ten shillings per year per family. Fourteen shillings is the amount of that tax in Natal, where a higher rate is paid upon all houses of European construction. These taxes may seem low to Americans, but they are large in comparison with the wages of the people, so large that they lead to the crowding of the natives, several families or a group of unmarried adults often living in one hut.

As far as I can see, the natives are now fairly well treated by their employers. The several provincial governments, as well as the Union government, try to protect them. Any establishment employing fifty or more blacks is subject to government regulation. Native labour inspectors go through the mines and other places where Negroes work, and report as to the treatment of the natives. Nevertheless, the white mine overseer is omnipotent, and can abuse the native if he is inclined to be brutal. I asked the American foreman of the underground workings of a mine in which four thousand Negroes were employed whether he could punish his men if they did not do as he wished. He replied:

"There is no trouble about that. If you want to mash the face of a Negro down here all you have to do is to see that you get him alone in some part of the workings. You can then treat him as you will, and if he makes any complaint you can say he assaulted you. The word of the black man is never taken here as against that of the white man, and so we can run things about as we please."

The Kaffirs own land all over South Africa. In many places the land still belongs to the tribes, and the chiefs have no right to sell or trade it away. In Southern Rhodesia the native commissioners assign the land for huts and grazing, allotting each kraal so much ground. When Cecil Rhodes died he ordered that the natives on his farms be undisturbed, and large blocks of government lands have been set aside for agriculture in different parts of Rhodesia. In Natal, a good many years ago, something like eight thousand acres were transferred to a trust, the rents and profits from which must all go to one tribe.

A few years later another native trust was given two million acres, and this is still administered for the Kaffirs of Natal. Later on the native lands were fenced off from those of the Europeans, and the boundaries between the tribes defined. In that province about one half of the Negroes live in kraals, on private lands, paying from five to twenty-five dollars per hut to the head men of their farms, which consist of from fifteen hundred to five thousand acres each. Groups of natives work these farms, under the direction of a hereditary chief or head man. The people of a kraal usually cultivate from five to ten acres of their land, the remainder being used for grazing in common.

CHAPTER XXXII

FEATHER FARMS OF SOUTH AFRICA

I HAVE come from a region of diamonds and gold to a city that ships more ostrich plumes than any other place in the world. This is Port Elizabeth, where for a long time feathers were the chief export. Of late years the shipments of wool, mohair, and hides have grown in importance. The city is one of the chief ports of South Africa, lying almost midway between Durban and Cape Town, and is the market for the great ostrich farms of the Cape province. At times as many as three quarters of a million birds are raised here, producing annually more than a million pounds of feathers, which sell for from ten to a hundred dollars a pound. They furnish the finest plumes that decorate the hats and the dresses of women all the world over. Like diamonds, ostrich plumes are a luxury commodity, and the demand for them depends largely upon changing fashions, so while vast fortunes have been made in the business, it is also subject to severe slumps.

A couple of generations or so ago nearly all our ostrich feathers came from wild birds, which were hunted with dogs and guns, and were often captured in pitfalls. They are still to be found in many places on the continent. There are some along the borders of the Sahara Desert, and one sometimes sees them racing over the sand, their

outstretched wings making them look as though they were swimming through the air. I saw a few in the Sudan, and in Omdurman was able to buy the choicest of white plumes from the wild birds for about two dollars apiece. There are many ostriches in Kenya Colony and Somaliland. All along the Uganda Railroad, from the Indian Ocean to Lake Victoria, I saw them feeding on the high plains. Down here in South Africa it is against the law to catch or shoot wild ostriches. The man who takes ostrich eggs from any of the crown lands without a license is subject to a fine of one hundred dollars.

Ostrich breeding began more than a half century ago, when some young birds were tamed by a South African. Then someone started hatching the eggs in incubators, and by 1875 the number of tame birds in the Cape province had increased to more than twenty thousand. Still later came the great ostrich boom, when the feathers sold at twenty dollars and upward a pound, and people from every country came to South Africa to start ostrich farms. At that time the average price of a pair of birds was nine hundred and seventy-five dollars, but some brought as much as four thousand dollars. Only about half as many ostrich feathers were then exported as now, yet they sold for more than five million dollars a year.

Ostrich raising is now an established industry. The government is interested in it and has passed many laws to protect the birds and help the breeders. At Port Elizabeth a government veterinary surgeon spends all his time studying ostrich diseases, and the breeding association has a stud book in which the pedigrees of the most noted birds are recorded. Some farmers have so improved their stock that their chicks bring from five hundred to a thousand

dollars apiece, and cock birds occasionally sell for five thousand or more. The farmers make a study of the feathers from each bird, and by crossing try to produce a breed that will yield the finest and most valuable plumes. Also, certain localities produce better feathers than others. The Oudtshoorn feather, for instance, is twenty-nine and one half inches in length, the Graff-Reinet measures about twenty-three inches, and the Middleburg about twenty-two.

During my stay in Egypt I visited a large ostrich farm near Cairo that had about two thousand birds and did a thriving business selling feathers to tourists. This farm lies on the edge of the desert, not far from Heliopolis, where Plato taught school, and near the tree under which the Virgin Mary and the Baby Jesus rested nineteen hundred odd years ago. It is divided into fields surrounded by high mud walls. In walking over the farm, I saw ostriches of all ages and sizes. Some of the birds were eight feet tall, while some were no larger than Plymouth Rock hens. The male and female ostriches were kept in pairs, usually one pair in each field. As I went through I shook my fist at one lady ostrich, but succeeded only in angering the man of the family. His neck, head, and legs turned as red as fire, and stalking up and down in his pen the old cock snapped at me like an angry dog. I kept well out of his reach, as my turbaned Egyptian guide told me that a kick from him would almost knock my head from my shoulders.

It was on the Egyptian farm that I first saw ostriches hatched in incubators. The manager told me that the eggs were taken from the nest as fast as laid, one being left for a nest egg. About twenty eggs to a hatching are

allowed each pair of ostriches, and the rest of the eggs that the hen lays go to the incubators.

In the incubators the eggs are put into padded boxes and kept in a temperature of just about one hundred degrees Fahrenheit. Each egg is as big as the head of a six-months-old baby, and of a smooth ivory white, freckled over with little black specks. As the time for hatching approaches, the eggs are tested day after day by placing them in a hole in the wall of a dark room. If the egg was not fertilized the light comes through the shell. If it was, there is light only at the larger end, where the air chamber is. The eggs are turned every day, and when they are just about ready to hatch, the shells are broken with a little hammer. The baby ostriches are then taken out and kept for twenty-four hours in boxes of warm cotton. Those with light eyes are killed, for they are albinos and are of no use for laying.

Most of the farmers of South Africa now use incubators, but others let the birds hatch their own eggs, and on nearly all the large farms these great creatures may be seen sitting on the nests that they have dug out of the sand. The breeding season among wild birds begins in June and lasts until the end of September, but if the tame ostriches are well fed they will continue to breed all the year round. Each pair of breeders is placed in a field to itself. These fields are often separated by double fences, for the cock ostriches are jealous creatures and will fight any other male birds they can get at. Often they break their legs in their attempts to kick through the wires.

The cock always selects the place for the nest. He makes a round, dish-shaped hollow in the sand. When it is completed to his satisfaction, he turns it over to the

Although the greatest feather markets of South Africa are in Port Elizabeth, in Cape Town also are stores that handle almost no other merchandise except ostrich plumes of all sizes, colours, and qualities.

Near Oudtshoorn in the Cape province is one of the most beautiful motor drives in all Africa. At Montagu Pass the road, which here ascends steadily for five miles, was cut out of the solid rock of the mountains.

hen, who then proceeds to lay one egg every other day for about twenty days. After resting a few days, she resumes laying until there are forty eggs or more. The cock sits on the eggs fully half of the time, usually taking charge of them at night. If the hen stays off too long he grows angry and drives her back to the nest. At the end of forty-two days the eggs are ready for hatching, and the chicks begin to kick their way out. The cock often assists them by breaking the shells with his breast bone, and the breeders sometimes go from nest to nest and gently crack the shells so that the chicks may break them apart more easily.

When first born the ostriches are soft young things with feathers as downy as those of a newly hatched chicken. They waddle about like little ducklings and are very delicate. Nevertheless, they are as big as full-grown hens, and seem to be all eyes and neck. They are often kept away from their parents at night, being placed in packing cases floored with dry sand and covered with bagging. They grow fast, and in a month are as big as turkeys. After they are two or three months old they are allowed to sleep together on the floor of a warm room, and at six months they can run about and stand almost as much exposure as the old birds.

The ostriches were formerly allowed to run in camps of two or three thousand acres, twenty acres being allowed for each bird. This is still done on the great plateau known as the Karoo, where the birds feed on the scrub bush, but there are now farms about Oudtshoorn and elsewhere where two ostriches are kept on one acre, and where they are fed like fine stock on a fixed daily ration of grass and other food.

The breeders have learned that fine feeding makes fine feathers, and that the ostriches can be raised profitably on alfalfa, especially where that crop is planted on irrigated lands. Five ostriches can be raised on one acre of alfalfa. With a feather yield of twenty-five or thirty-five dollars per ostrich, this means that from fifty acres a farmer can realize from six to eight thousand dollars in a good feather year.

Some of the farmers cut and stack the crop and then feed it to the ostriches when other food is scarce, while some let the birds graze. Alfalfa-fed birds have glossier and heavier feathers than those fed upon wild grass and scrub. However, though the quills are heavier, they also break more easily, and for this reason are not so much liked by the dealers as the plumes of the birds from the veldt. Irrigated land suitable for ostriches is fast increasing in value, the best now bringing as much as one thousand dollars an acre.

Ostriches fed on alfalfa can sometimes be plucked three times in two years, but once a year is a fair average, or twice in three years where food is less plentiful. The plumes from the wings and the tails of the full-grown cocks are the most valuable. There are twenty-five long white plumes on each wing of a male. The rest of the plumes are black on the cock ostrich and drab or grayish on the hen. In addition, there are smaller feathers known as tips, and all together one bird will yield about three hundred saleable plumes.

The birds are ready for the first picking when from seven to nine months old. The chick feathers bring very little, but after that the plumes improve steadily in quality and it is not uncommon for a grown bird to yield more

than one hundred dollars' worth in a good year. While the ostrich farmers speak of "plucking" the birds, as a matter of fact, the plumes are not pulled out, as this term would imply. Such treatment would not only cause great pain but would injure the birds, and ostriches are valuable property. The quills are really snipped off with shears, causing the ostriches just about as much discomfort as shearing does sheep.

Plucking an ostrich is no easy matter. If I had no means of defense I would rather tackle a mad bull than one of these great birds. The only thing the cock is afraid of is a thorn bush, which he knows may put out his eyes. When angry he will try to kick an unarmed man to death. He kicks forward and downward, and as the blow loses its force as his foot descends, the best thing for a person to do in case of attack is to throw oneself flat on the ground.

At plucking time the birds are driven by the farmers or the natives into little pens just large enough for one ostrich to stand in and with sides so high that the captives cannot kick. To keep him quiet a stocking or great cloth mitten is drawn over his head. His wings are then raised and the plumes cut off, the ostrich roaring mournfully all during the process. When turned out he looks as ugly as a sheep after shearing, but within a few weeks the stumps of the quills die and fall out, and the new feathers begin to appear.

After the feathers are taken off they are sorted into about twenty different lengths and colours, made into bundles, and sent in to Port Elizabeth to be sold at the auctions held there every two weeks. They are carefully packed in boxes and sealed before shipment,

and are consigned to licensed agents who sell on a commission basis.

The auction sales are held in what is known as the Feather Warehouse, which consists of a great room filled with trestle-work tables, and covering more than an acre. Upon these tables the feathers are laid out in lots, and buyers from all parts of the world bid on each lot as it is put up for sale. The cheap tips bring something like five dollars a pound, while the plumes from the wings and tails are worth two hundred dollars a pound and upward. Sometimes a hundred thousand dollars' worth of feathers are displayed at one time, while the yearly auctions bring in several millions.

After re-sorting, the feathers are shipped abroad, much of the product going to London, where great feather auctions are held several times every year. More and more of the plumes, however, are exported direct to the United States, the re-sorting and finishing of them being done by our milliners and dealers at home. The poorest feathers go to Germany, where they are made up into boas and plumes for dolls' hats.

Cape Town was laid out by the Dutch, but the buildings put up by the Boers have now almost disappeared, and to-day it has stores and public buildings that make it not unlike a modern city of England or the United States.

Rising sharply behind Cape Town to a height of more than three thousand feet are the Devil's Peak and Table Mountain, the latter's two-mile-long flat top often obscured by its "table cloth" of low-hanging clouds.

CHAPTER XXXIII

AT THE CONTINENT'S END

STAND with me on the top of Table Mountain and take a look over Cape Town, the gateway to South Africa, and one of the most beautifully situated seaports in the world. In the charm of its setting it ranks with Naples, Rio de Janeiro, and San Francisco. We are on a mighty shelf of rock that rises almost straight up behind the city to a height of more than three thousand feet. If you could take one of the highest of our Alleghany Mountains, slice off its top so that it looked like a gigantic table, and plant it down behind Boston, you might obtain much the same effect that Table Mountain has here near the Cape of Good Hope. The mountain sides would have to be cut so as to be almost precipitous, and its two-mile-long top made as regular as though Nature had smoothed it off with a cyclopean trowel.

At times Table Mountain stands out clearly against the sky, at others it is lost in the mist, and again low, overhanging clouds rest upon it and fall down about its sides like a tablecloth. No one can tell when this tablecloth will descend upon the mountain nor how long it will stay. Not only does it obscure the beauty of Table Mountain, but tourists have been killed by falling over precipices while wandering about in this dense fog.

Though it takes one three hours to climb up the great rock, the view from the top well repays the effort. In

front of us and to our right and left the mighty southern ocean stretches away to the horizon. We can almost follow with our eyes the course of Bartholomew Diaz when he discovered the Cape of Good Hope, six years before Columbus started out to find the New World. The ocean below us was then so rough that Diaz named that point the Cape of Storms. It was along the same route that Vasco da Gama, a few years later, went on around the continent to India, skirting Cape Agulhas, the southernmost point of Africa, which lies to the east of us.

Just below us, between Table Mountain and the sea, and so close that we can toss a stone down into its streets, is Cape Town. Beyond the city is the harbour of Table Bay. In place of the sailing vessels of Diaz and da Gama that once anchored there, mighty steamers of thousands of tons are now floating at the wharves inside the shelter of the great breakwaters. More than a thousand such vessels call at this port every year.

Turning from the harbour, we look across the ravine from where we are standing to the Lion's Head, a great hill that forms one end of the horseshoe of land surrounding the bay. That peak is about half as high as Table Mountain. The electric car that we can see whizzing along at its feet, looking beetle-like in the distance, offers one of the finest scenic rides of the world. At the other end of the horseshoe is the Devil's Peak, which reaches a height almost equal to that on which we are standing. It is connected with Table Mountain by a rocky saddle two thousand feet high.

But let us go down from these heights and take a walk through this South African capital. For more than two hundred years Cape Town was the chief door through

which white settlers entered this country. It has now in the neighbourhood of two hundred thousand people, and is one of the finest cities of the southern hemisphere. Originally laid out as a Dutch town, its old Boer buildings are gradually disappearing, and it has now shops and streets that would do credit to the largest cities of the United States. Adderley Street, the principal thoroughfare, is lined with big business buildings. Cape Town has a post office larger than that of any American city of twice its size, and its Parliament House is among the most imposing structures in Africa. It is in the renaissance style, with porticos upheld by Corinthian columns, and is surrounded by beautiful gardens, in which stands a marble statue of Queen Victoria.

Passing Parliament House, we visit the Botanical Gardens and the South African Museum, where there is a collection of rock paintings and implements of the Stone Age. At the door are the so-called "post-office" stones beneath which, long ago, captains of east-bound ships passing the Cape of Good Hope used to put letters for home, to be picked up by the next ship touching at the Cape on its homeward voyage.

One of the most interesting buildings in all South Africa is Groote Schuur, the Cape Town home of Cecil Rhodes. When Rhodes became prime minister of Cape Colony, he realized that he must give up his habit of living in all sorts of humble quarters, and establish a residence in keeping with his wealth and position. Groote Schuur was his first real home in South Africa. Here he fashioned the policies of the British South Africa Company, kept open house for distinguished visitors and for all who were interested in developing South Africa,

sketched out his railway projects, and made new plans of empire building. On the walls of his simple bedroom with its huge window facing Table Mountain hangs the small map on which he drew in red ink the route of his Cape-to-Cairo line. "It must be all red," said he, meaning all British. In the billiard room is the flag with the Crescent and Cape device that he had made to be carried on the first locomotive to complete the journey over the route.

Groote Schuur means "great granary," and it was originally constructed in 1657 as a huge barn. It was used by the early Dutch governors as a warehouse for their stores of grain, wines, skins, and wool, as well as for supplies for Dutch ships calling at Table Bay on their voyages to or from Java. It is now a large, rambling house in the best Dutch Colonial style, beautiful in its proportions, and in perfect harmony with its setting. Rhodes used to spend many hours on the wide veranda at the back, which commands a splendid view of Table Mountain. Sometimes as many as fifty people would take tea with him there, and in summer he and his guests could look out upon the hundreds upon hundreds of blue hydrangeas that he had planted by the acre. In his will Rhodes directed that the house be used as the official residence of the prime minister of United South Africa. Although the Union was not formed until eight years after his death, he was sure that it would come.

Besides being the legislative centre and the great health and pleasure resort of the Union, Cape Town is the business capital of South Africa and the headquarters of all the big banks. In the United States every little town has its individual bank, and there are hundreds of small in-

stitutions operating with capitals of fifty thousand dollars and upward. Here all the money is handled by a half-dozen great banks, with branches in all parts of South Africa.

From the top of Table Mountain the harbour of Cape Town looked small, but as we go down to the wharves we see that there are more than two miles of quays. Along them are electric cranes, and back of them are warehouses that can store seventy thousand tons of cargo at one time. Among the ships at anchor are vessels from East and West Africa and from Europe, great liners on their way to Australia and India, and mail steamers of the Union Castle Company, which carries not only passengers and express, but also the vast treasures always flowing out of the diamond and the gold mines of South Africa. Down in their vaults are packages of rough diamonds and great yellow gold bricks. In the hold are ostrich feathers for London, sheep's wool, Angora mohair, and great bales of cowskins and goatskins.

The exports of the Union of South Africa now amount to between three and four hundred million dollars a year, and the imports are more than two hundred and fifty millions, making a total foreign trade of about six hundred million dollars. The United States are the best customers for the diamonds and the ostrich feathers, and many South African hides find their way to our tanneries.

In return, the United States furnishes the Union with about fifteen per cent. of its imports. I saw our threshing machines, mowers, and reapers in the Cape province, although the Canadians are competing with us as to harvesting machinery, and small farm tools are now being shipped here from England. American tractors are used

on many of the farms, and the American windmill may be seen almost everywhere. The water used in Cape Town flows through iron pipes made in the United States. Since the World War gave the Union such a keen interest in being self-sufficient and doing a lot of her own manufacturing, American machinery firms have sold many thousands of dollars' worth of factory equipment down here.

Cape Town is the metropolis of the province of the Cape of Good Hope, which is the oldest and by far the best settled part of South Africa. It has nearly as many white people as Boston, and almost as many blacks as the total population of Chicago. This city with its suburbs has more than one hundred and fifty thousand whites, Port Elizabeth has about twenty-three thousand, and Kimberley seventeen thousand or more. Woodstock has thirty-nine thousand, East London nearly eighteen thousand, and Grahamstown seven thousand. There are towns of from five to ten thousand people scattered here and there over the country, and there are many thriving farming communities. The province is twice as big as Great Britain or Ireland, and, including Bechuanaland, which was annexed some years ago, it is larger than Texas or any country in Europe with the exception of Russia.

In coming here from the Transvaal I rode for a day through the Orange Free State, which is about as large as New York, and from there across the Cape province to the Cape of Good Hope. The land is high and dry, and most of it has a climate healthful for white men. It is largely a grassy plain, fading out here and there into desert.

At the north the land drops in mighty steps known as

the Karoos. The upper Karoo, which ranges in altitude from three thousand to six thousand feet, is almost a desert, and droughts are frequent. Below this is what is known as the Great Karoo, consisting of rolling plains rising gradually to a height of about four thousand feet. This country is covered with a kind of bush with aromatic yellow blooms, upon which feed cattle, goats, and sheep.

Irrigation of these arid regions is one of the big agricultural problems in the Union. In a land of so little water, how best to catch and use the precious rain that falls during the four months' wet season is an important question. From the standpoint of the cattle raisers, the scrub bush of the Karoo is better forage than the grass veldt farther north, but four acres of it are necessary to keep one sheep, and with irrigation these lands could be made much more profitable.

The second greatest irrigation scheme in all Africa is the big dam at Kaffir's Poort in the Karoo, which yields place only to the Aswan Dam in Egypt. This, too, was one of Cecil Rhodes' projects, although he did not live to see its completion. It was constructed by the Smartt Syndicate Farms at a cost of eight hundred thousand dollars. Its capacity is twenty-five thousand million gallons, and it is planned to bring a total of twenty thousand acres under irrigation, increasing the value of the land from five dollars an acre to anywhere from a hundred and fifty to three hundred dollars. Large crops of wheat and alfalfa, or lucerne, as it is called here, can be raised on these irrigated lands. A South African official paper states that "since 1903 lucerne has made more fortunes than any other produce in the Union except gold and diamonds."

The average ranch in Cape Colony contains three thou-

sand acres or more. The grass is usually thin, and it is estimated that for every head of cattle raised on the veldt from ten to twenty acres of land are required and one or two acres for each sheep. More sheep and goats are now raised than any other kinds of live stock. Some farmers have flocks of ten thousand sheep, and I am told that there are two and a half million goats in the province. Because of the favourable qualities of the climate and forage excellent wool is produced, South African mohair being especially fine and bringing the highest prices. The Union is now exporting something like fifty million dollars' worth of wool a year, much of it from the Cape province. The sheep are Merinos, which were brought here centuries ago from Spain, at about the same time that they formed the beginning of the Australian flocks. There is also a common Cape sheep that thrives well.

South of the grazing regions is a large area devoted to grain and fruit raising. Not far from the Cape of Good Hope are large vineyards that produce something like ten million gallons of wine and a million and a half gallons of brandy every year. Peaches, apricots, apples, and pears are raised in great abundance and are shipped in cold storage to London and the United States. Large quantities also are dried or made into jams and jellies. In recent years the pineapple industry has grown by leaps and bounds, and in the Cape province alone there are more than eight million acres under pineapple cultivation. Practically the entire production is canned at Port Elizabeth.

Although agriculture is still the least important of the sources of wealth of the Union, it is said that almost any product of the temperate and the sub-tropical zones can

The rocky formation known as the Lion's Head stands like a sentinel at one end of the horseshoe of land that surrounds Table Bay. The beautiful drives on its slopes were built largely by convict labour.

From the business part of Cape Town one can go by trolley in a few minutes to any one of a dozen or more pretty little suburbs, where charming old houses with beautiful gardens line the shaded streets.

be grown successfully in South Africa. In recent years the development of the farming regions has made great strides. Experimental farms have been established, blooded live stock imported, roads and bridges built in the interior, scientific farm experts employed, and coöperative marketing societies formed.

The more far-seeing statesmen look forward to the day when the farms of the Union will, as in such industrial nations as the United States, be the chief source of national income and wealth. When that time comes, they predict, South Africa will be supporting a great population and will have taken her place, economically and politically, among the more important countries of the world. To-day, it is one of the more youthful of the self-governing British dominions, but it is surely destined to be one of the great countries of the future.

THE END

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